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"Quantam ego quidem video motus morborum fere omnes a motibus in systemate nervorum ita pendent ut morbi fere omnes quodammodo Nervosi dici queant."—CULLEN'S NOSOLOGY: BOOK II, P, 181—EDINBURG ED., 1780.

THE
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*NEUROLOGY AND PSYCHOLOGY,
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Intended Especially to Subserve the Wants of the
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INDEX

ORIGINAL CONTRIBUTIONS

A General Discussion of Dementia Præcox.....	347	Is Genius a Sport, a Neurosis, or a Child Potentiality Developed?....	70
Auditory Hallucinations in a Deaf Insane Patient.....	245	Is Genius a Sport, a Neurosis, or a Child Potentiality Developed?....	141
Heavenly Bridegrooms.....	52	Kleptomania and Pyromania.....	252
Heavenly Bridegrooms.....	211	Kraepelin on "Paranoid Conditions" ..	184
Heavenly Bridegrooms.....	259	Netes on the History of Psychiatry..	35
Heine-Medin's Disease—With Medin's Original Descriptions.....	15	Notes on the History of Psychiatry..	158
Heine-Medin's Disease.....	271	Notes on the History of Psychiatry..	287
Heredity—A Study of an American Genealogy.....	369	Notes on the History of Psychiatry..	331
Hermaphroditism in the Human Species.....	268	The Late Dr. Charles H. Hughes.....	383
Hypothetical Questions.....	362	The Pathogenesis of some Non- Psychogenetic Types of Func- tional Nervous Disorder.....	375
		The Psychologic Interpretation of Alcoholic Intemperance and Its Physio-Psychic Treatment.....	1

SELECTIONS

CLINICAL NEUROLOGY.	CLINICAL PSYCHIATRY.
A Case of Traumatic Diabetes in a Neurasthenic.....	Alcoholism and Vice.....
An Interesting Monograph.....	Dementia Præcox Studies.....
A New Treatment for Graves' Disease.....	Insanity from Drugs as Defense to Crime—Effect of Prescription....
Coenesthopathia.....	317
Composition and Structure of Urinod ..	The Insane In Switzerland and Spain.....
Goiter.....	92
Latent Neurosyphilis and the Ques- tion of General Paresis.....	The Mental Patients of Pennsyl- vania Hospital at Philadelphia..
224	94
Night Terrors.....	The Wet Brain in Dementia Præcox
389	96
Revaccination Neuralgia.....	The Work of a Madman.....
313	92
Simulation of Sciatica.....	Traumatic Dementia Præcox.....
388	95
The Cause of Chorca Complicating Pregnancy	CLINICAL PSYCHOPATHOLOGY.
223	Sex Organ Decadence in Insanity..
The Reaction of the Circulation to Psychic Processes.....	86
89	
The Treatment of Exophthalmic Goiter.....	NEUROCHEMIC PSYCHOLOGY.
387	Clinical Content of Blood Sugar.....
Voice Defects Following Adenoid and Tonsil Operations.....	84
389	
	NEURODIAGNOSIS AND PROGNOSIS.
	Soft Eyeball.....
	85

NEURODIAGNOSIS.

An Ocular Compressor for the Oculocardiac Reflex	391
Reflex Disturbances and Cerebral Insufficiency.....	392
Symptoms of Disease of the Pituit- ary Body.....	86
Toe Reflex	391

NEUROLOGY.

A Criminal Epileptic, with Con- sideration of Epilepsy as a Medicolegal Problem	393
During a "Campaign".....	317
Hemiplegias Due to War Wounds.....	315
In Exophthalmic Goitre	315
Insanity by Contagion.....	317

NEUROPATHOLOGY.

Damage to Cortical Visual Centers by a Rifle Bullet.....	100
Metabolism Studies of Angioneurotic Edema.....	397
The Cause of Cancer.....	99
The Role of Anopheles Punctipennis Say in the Transmission of Malaria	101
The Syndrome of the Globus Palli- dus.....	396
Synesthesialgia.....	396
Types of Hydrocephalus.....	393

NEUROPHYSIOLOGY.

Exhaustion as Distinguished from Fatigue.....	83
Some Functions of the Thyroid Gland and Their Relationship to Goitre.....	398

NEUROSURGERY.

Neuroplasty.....	399
------------------	-----

NEUROTHERAPY.

Adrenalin Hormone Control of Sym- pathetic.....	105
Balneotherapy.....	105
Calcium in Epilepsy.....	225
Calcium in Epilepsy.....	313
Is Obstetrics a Lost Art?	103
Limitations of Salvarsan.....	104
Local Treatment of Nerve Lesions.....	390
Mexican Drugs.....	103
Opium Alkaloids and the Heart	104
Sciatica.....	104
Serpiginous Bromide Ulceration Last- ing Several Years.....	313
The Management of the Speech Defect Problem in the Public Schools.....	391
Treatment of Tabes and General Paresis.....	314

PSYCHOLOGY.

Some Developmental Psychology in Lower Animals and in Man, and its Contribution to Certain Theories of Adult Mental Tests	402
The Alcoholic as Seen in Court.....	319

PSYCHOTHERAPY.

The Illinois State Hospitals for Insane.....	88
The Physician.....	88

EDITORIALS

Achilles Rose	117	Necessity for Medical Examination of Prisoners at the Time of Trial. The Relationship of In- sanity to Crime.....	227
An Inhumane, Unwise War Order....	108	Note to Authors.....	107
A Patient With a Broken Neck.....	110	Powder Explosion Arterial and Nerve Results.....	323
A Sane, Smart Alex in a Lunatic Asylum.....	112	Resolutions of the New York Neuro- logical Society.....	404
Battlefield Casualties.....	240	Suicides in Hysteria	326
Clarence Prentice, M. D.,	114	Thaw's Sanity.....	240
Combating Insects Affecting the Health of Man.....	406	Thirty-Seven Volumes Completed ..	408
Dr. Andrew C. Smith and Goiter ..	110	The American Social Hygiene As- sociation.....	405
Dr. Stewart Paton.....	117	The Baptist Sanitarium.....	116
Fatigue Poison (Muscle Toxine) in Court.....	238	The Bizarre and Cruel Hazing Stunts.....	241
"Forgers of Lies—Physicians of No Value".....	236	The Council on Pharmacy and Chemistry, A. M. A.	115
Give the Womb a Rest	114	The Death of Doctor Charles H. Hughes.....	403
Hon. Elihu Root on Excessive Wealth as a Cause of Disease....	116	The Diversion of Bromide.....	109
Hospital Noises.....	116	The "General Practitioner".....	241
If the War Slaughter Continues.....	109	The Improbable Discovery of a Bacillus Epilepticus.....	243
Indol, Though the Lexicographers....	242	The Name of the Louisville Monthly Journal of Medicine and Surg- ery.....	407
Isolation Induced Insanity.....	108	The National Board of Medical Examiners.....	407
Kenneth Millican's Death	117	The Peril of too Sudden Opium Withdrawal.....	112
Maternal Heredity.....	326		
Me and God Egotism in the Medical Profession.....	111		
More Attendants for the City Sanitarium.....	113		
Mr. William Price Hagee Dead.....	117		
National Conference on Race Better- ment.....	111		
National Eugenics	242		

The Practice of Medicine According to Missouri Law	239	The Wisconsin Asexualizing Eugenic Law	111
The Subject of the Moron	118	We Shall Some Day	116
The War and Cerebral Traumatisms	324	With this Issue	108

CORRESPONDENCE

Napoleon as a Student of Religion....	409	Note on "A New Theory of Kissing"	119
---------------------------------------	-----	---	-----

OBITUARY

By the Death of the Founder of the Alienist and Neurologist	321	The Death of Dr. Amos Sawyer	243
--	-----	------------------------------------	-----

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

A Clinical Manual of Mental Dis- eases	133	Bulletin of National University of Arts and Sciences	121
A Composite Discussion of the Therapy of Syphilis	139	Cerebral Edema (Wet Brain) in Chronic Alcoholism	134
A Mechanistic View of War and Peace	132	Christianity and Sex Problems	329
A Manual of Nervous Diseases	414	Chronic Intestinal Stasis	138
A Study of Locomotor Ataxia and Kindred Diseases	139	Chronic Intestinal Stasis-Fluoroscop- ic and X-ray Diagnosis in the Light of Operative Findings	137
A Study of Respiration and Circula- tion in Picrotoxin Convulsions	136	Clinical Studies in the Relationship of Insanity to Crime	135
American Thermal Springs	138	Course of Lectures	137
America's Pressing Mortality Prob- lem	130	Criminal Responsibility	137
Anatomy of the Brain and Spinal Cord	127	Deformities of the Foot	419
Annual Report of the Surgeon General	134	Dementia Precox Studies	133
Aussi par le meme Auteur	138	Diagnosis and Treatment of Surgical Diseases of the Spinal Cord and its Membranes	412
Biological Products	135	Differentiation Between Upper (Cen- tral) and Lower (Peripheral) Motor Neuron Involvement	417
Brain-Tumor or Hysteria	419		

From Lippincott Company.....	136	Preventable Forms of Mental Disease and How to Prevent Them.....	418
Gluteal Myositis.....	138	Principles of Criminal Anthropology.....	137
Healy's "The Individual Delinquent".....	134	Psychiatry and Gynecology.....	416
How Insanity is Studied and Treat- ed in Indiana.....	128	Report of Inspector-General of the Insane.....	418
How to Live. Rules for Healthful Living Based on Modern Science.....	415	Report of Trachoma a Menace to America.....	131
Illinois State Hospitals Medical As- sociation.....	136	Research Department of the Chicago House of Correction.....	137
Index of 448 Post-Mortems of the Insane.....	129	"Rest Cottage" for Nutritional and Hygienic Treatments.....	136
Induced Leucocytosis as an Aid to Surgery.....	418	Review of Terman's "Measurement of Intelligence".....	418
Inoculation Experiment with Pure Culture of Spirochaeta Hyos.....	139	Rugged Psychological Treatment of the Neurotic.....	139
Intrasphincteric Vesical Tumors.....	419	Some Facts and Problems of Heredi- ty.....	138
La Psychologie de l'Attention.....	131	Some Facts Pertaining to the Was- sermann Reaction.....	132
Les Actualites Medicales. Diagnostic des Maladies de la Moelle.....	134	"Speaking of Operations".....	133
Mechanisms of Character Formation.....	415	The Biological Point of View in Psychology and Psychiatry.....	417
Medical Problem of the Criminal Class.....	120	The Climate of California.....	138
Mentally Deficient Children.....	328	The Cure of the "Incurable," a Plea for More Accurate Diagnosis and More Careful Prognosis in Mal- ignant Disease.....	135
Mortality Statistics for 1914.....	417	The Development of Intelligence in Children.....	413
Naudin and Meedels' Law.....	125	The Differential Diagnosis of Some of the More Common Types of Psychoses.....	417
New Light on Eugenics.....	139	The Eyelids and Lachrymal Ap- paratus of Birds.....	139
Observations on Pellagra and its Treatment.....	138		
Official Rules.....	244		
Operation of Massachusetts' Laws for Hospital Observation in Cases of Alleged Mental Disease and Defect.....	139		
Painless Childbirth, Eutocia and Nitrous Oxid-Oxygen Analgesia.....	129		
Pennsylvania Hospital.....	418		
Plastic Surgery—Corrective and Pal- liative Repair—in the Treatment of Malignant Disease.....	135		

- | | | | |
|--|-----|--|-----|
| The Factor of Fear in Nervous Cases..... | 419 | The Open Court Publishing Company | 132 |
| The Institution Quarterly..... | 416 | The Rockefeller Foundation..... | 137 |
| The Intelligence Examination and Evaluation..... | 418 | The Significance of Psychoanalysis for the Mental Science..... | 417 |
| The Intelligence of the Feeble-Minded..... | 416 | The Treatment of Paralysis Agitans With Para-Thyroid Gland ... | 418 |
| The Internal Secretions..... | 138 | The Treatment of Paresis by Injections of Neosalvarsan Into the Lateral Ventricle..... | 135 |
| The Interpretation of Roentgenograms of the Chest in Tuberculosis..... | 418 | The University of Missouri Bulletin | 130 |
| The Laboratories of McLean Hospital..... | 417 | The Work of Our Hands..... | 123 |
| The Mulford Digest..... | 136 | Thirty-Fourth Annual Report of the State Hospital for the Insane... | 418 |
| The Mythology of All Races..... | 411 | This is an Interesting Review | 244 |
| The New Chivalry—Health..... | 328 | Vital Conservation..... | 124 |
| The Nutrition of Pulmonary Tissues | 244 | What is the Best End-Point of the Reaction in the Frog-Heart Method of Digitalis Assay?..... | 135 |
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ALIENIST AND NEUROLOGIST

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NO. 1.

THE PSYCHOLOGIC INTERPRETATION OF ALCOHOLIC INTEMPERANCE AND ITS PHYSIO-PSYCHIC TREATMENT.*

By JOHN D. QUACKENBOS, A.M., M.D.,

Emeritus Professor in Columbia University; Member of the London Society for Psychical Research; Fellow of the New York Academy of Medicine, of the New Hampshire Medical Society and the New Hampshire Society for the Prevention of Tuberculosis; Member of the New York Medical Association; Member of the American Medical Association; Member of the American Association for the Advancement of Science.

By way of introduction to the theme that has been assigned me, I beg your leave briefly to describe the weapon with which I strike at the physio-psychic complex involved in every case of alcoholism.

There exists in human beings a mass of latent unused power—a reserve fund of energy, or capacity for performing work, which is applicable to emergencies, to extraordinary demands on the fortitude, exalted control, innate aptitude, or regenerating faculty of the individual. It is this power that may be incited to control the psychic elements in all diseases, and so effect the cure of those

* Delivered at Washington, December 15, 1915, before the American Society for the Study of Alcohol and Narcotic Drugs.

that are functional and the alleviation of suffering in those that are organic. It is this power that commands the output of thought, the projection of genius, the material expression of all that is best in the man. It is this power which, dynamically directed and applied, regenerates the outcast, sobers the drunkard, rescues the drug-fiend, restores to normal thought and feeling the distraught and suicidal, the perverted and the obsessed.

Its expression implies the existence of a personal, immaterial, intelligent element in which it inheres. Something lives and rules outside, and yet pertaining to, the man we see and know and associate with, that conditions his intellectual and moral expression and controls his very will. And this something is other than God. It is variously known as the subconscious mind, the subliminal self, the superior spiritual personality. Granted supersensible power, immeasurable and universally applicable—accepted its latent residence in the superior cosmic human self, how is it to be exploited? How can this abeyant efficiency be harnessed and made available in the work-a-day world? The answer is, through Suggestion, which is nothing more than an earnest, straightforward, dynamic appeal to the higher self. The object of suggestion is to establish self-control in physical, mental, or moral relaxation; to impart pluck, push, nerve, self-reliance to the mortal mind; to strengthen the will; to bring into personal touch with the truth, which always emancipates. Suggestion, in other words, makes efficient, and efficiency in a state of perfect action is happiness.

There is no suggestion to the will of another in psychotherapy. Nobody but a fool would submit to such treatment, were this possible; and nobody but an unprincipled operator would practice; even for the relief of suffering, a method that makes a fellow being his automaton. My subjects do what I urge them to do, not because I urge them, but because they are made clearly to see that the course suggested conjugates with right, truth, expediency, necessity.

One of the most important applications of psychodynamics is its combination with rational physical attention in the treatment of drink and drug habits. The results here obtained are without parallel, dependent as they are on the automatic operation of a super-physical control rendered active by a resistless appeal. The drink and drug cures so extensively advertised fail utterly to impart the great essential to radical regeneration and lasting abstinence—viz., spontaneous undesisting moral sway. They evoke not those forces of the soul that are a thousand times stronger than appetite or desire. Hence about 70 per cent of drinkers who seek relief at the sanatoriums are sobered only for a time and sooner or later relapse. The drink habit cannot be cured by nauseating the victim with lobelia, purging him with drastic cathartics, blinding him with belladonna, or vomiting him with apomorphia. Such treatment creates a revulsion in the patient. He soon recovers from the effect of the physic used to find his craving unchanged and his powers of resistance as foisonless as ever. Drug cures leave the moral nature uninfluenced. Dr. Partridge of Clark University convincingly contends that no drug can reach the heart of the intoxication impulse.

To all such treatment, which turns absolutely on the faith of the patient, how incomparably superior must be that which enthrones the image of the Eternal in the man, the God part which stands behind that faith and makes it possible. This elevation of the Ego to sovereign and consummate power is what exalted suggestion accomplishes. In the speaker's experience, covering 1200 cases of alcoholic inebriety, and according to reports in foreign medical journals, at least eighty per cent of those who accept it may be saved; and if all who seek transfigurement could be persuaded to carry out unremittingly the directions given until the damage done the brain should be repaired, that percentage might be raised to 100. Of the 1200 cases treated psychovitaly by me, 20 per cent seemingly failed to respond. Of these a number cannot be traced; a number indifferently sub-

mitted to one or two treatments out of deference to the entreaties of friends, and hence there was no objective self-surrender; a few, through their excesses, had entered the syndrome of alcoholic dementia; some were society women, who, in my experience, are almost without the pale of hope. On the whole, however, in no other condition that I have been called upon to treat by suggestion, am I warranted in saying to the sufferer: "If you sincerely desire to be cured of this malady, and will carry out my instructions faithfully for a year, you can be cured beyond a peradventure."

The drink habit is growing, especially among our women, from shop maid and nymph du pave to the pampered dames of upper society. The punch bowl figures at functions, and proud-pied belles dip freely therein. Cocktails and highballs are everywhere on dress parade, and the wanton cordax has been revived by dance-mad, up-to-date Bacchantes amid the hocktide familiarity of the roof-garden and the misnamed "the dansant." Girls representing good families, conspicuously made-up, are not missing from the throng. Debutantes, not necessarily of the fast set, unblushingly assert a right to drink wine and smoke cigarettes at luncheons and levees, at high-priced cafes and in the corridors of the hotels; and not a few of this class, as well as young married women, have been brought to the writer's office in a state of intoxication. Such has become the vogue; and, worse than this, girls in their teens see no impropriety in drinking publicly with men companions. A few years ago, a woman with a cocktail before her, amid much surroundings, the air polluted with tobacco smoke, would have been set down as a cyprian. The abstinent, unobtrusive young lady of the past generation is giving place to a coarse, boisterous, immodestly attired bon-vivant, controlled by unworthy impulses, and wholly unfit to fulfill her function in the community as an inspirer to meritorious action, or her function in the home as a character-former, a wife and a mother. Verily, the beaumonde reflects a piteous state of preparedness for combat with the forces

of evil that threaten to disrupt society. Verily, the national force that is wasting today in America is woman; and she who prostitutes her obligation to her sex in a life of self-indulgence and demoralizing example should be brought to her senses by the thought that no nation can be truly great in which the rights of woman are not deservedly upheld, and her refined intellect is not respected as a directing agency and an impelling power.

What has been said is germane to the attitude of the well-do-do classes for with the great mass of working people in the cities, the habit of drink is noticeably on the wane; and the saloon-keepers who have long absorbed a generous fraction of the laborer's hard-earned wage fear for the future of their nefarious business of "swapping the souls of men" for mammon. The poor or moderately salaried man is not only developing a knowledge of the perils of alcoholic indulgence through the strenuous efforts of both Catholic and Protestant educators, but he recognizes the necessity of economy, and has come to appreciate the superior attractions of the photo-drama. The moving picture-show is the great adversary of the saloon. In its comfortable parterre, a man may be entertained with his family an hour or two for less money than he would naturally spend in the card rooms that figure at the rear of every bar. These clubs of the poor, where a man of labor and the youth of the store pass their evenings in drinking and card-playing, are dehumanizing our brothers of the tenement, aiming to destroy their capacity both for conferring and enjoying domestic happiness. The moving picture-show offers a form of instructive entertainment that is cheap enough to be within the reach of all working people, and popular enough to drain the lounging-rooms of the cabarets. The saloon is out of step with the times.

But independent of the contingent of working people who are abjuring alcohol in the cities, the prevalent wholesale addiction to the use of stimulants—with its accompanying degenerations of organs; its pernicious influence in the causation of pulmonary disease; its

marked action in increasing the mortality rate in the case of all diseases, about 15 per cent. of all deaths being due to such action, directly or indirectly; the part it plays in the induction of insanity, standing as the greatest single independent cause of mental downpitch; and its tendency to transmit to offspring not only epilepsy, deaf-mutism, and mental enfeeblement, but marked criminal propensity—is assuming proportions so appalling that it may justly be regarded as perhaps the greatest existing menace to the stability of American institutions.

The opinion of the medical profession in regard to the use of alcohol as a beverage and a therapeutic agent is distinctly unfavorable today. Physicians look upon it as a protoplasmic poison, and are advising against its employment where it was once warmly recommended, as, for instance, in nervous depression, dyspepsia, insomnia and tuberculosis. We now know that alcoholic drinks interfere with digestion, predispose to cardiorenal and pulmonary troubles, and impair the elimination of toxins created in the body which are the cause of gastric acidity, sleeplessness and general neurasthenia, as well as of high blood pressure and premature arterio-sclerosis. Thus the use of alcohol indirectly contributes to the development of a form of arterial degeneration designated as hardening, which is directly due to auto-intoxication accentuated by the ingestion of this poison. The majority of people over-eat and under-exercise. Sixty per cent. of Americans work indoors at sedentary vocations, and these drink moderately as a habit, and oversmoke as well, in response to the demand of a system depressed by a superabundance of food that cannot be disposed of, and of unnatural work that keeps up the demand.

What these persons drink to reinforce nervous energy is itself a most dangerous compound made of crude grain or potato spirits, or fusel oil, and various "essences" manufactured in laboratories—a compound sixteen times as deadly in its effects on the brain and other organs as is ethyl alcohol in pure whiskey. And the beer and ale of this country all contain sulphurous acid and other

adulterants, much of it preservatives, rendering it antagonistic to digestion which is a form of fermentation, and constituting it a kidney and liver irritant which has to be reckoned with by the doctor and is taken into serious consideration by life insurance companies.

In spite of these accepted facts, drinking goes madly on. A discussion of the psychology of the habit would seem to imply a presentation of the various reasons advanced by intemperants for their addiction to "the juice divine" (Rubaiyat.)

Some drink to hide conditions that mortify, worry, depress, or agonize—business entanglements, loss of wife or fiancée, blood-guilt. Like Omar Kaiyam, they drink inconsolate, not for pleasure or profligacy, nor to renege religion and good morals, but solely to drown care and escape from themselves. How often it has to be demonstrated to these deluded patients that obscuring conditions does not alter them, but merely renders the dupe less capable of coping with them. "To drink my wine and take my pleasure," said the Persian poet, "that is how I live. To care no jot for heresy or orthodoxy, that is my creed." Yet heresy and orthodoxy continue to exist, and the man's responsibility is none the less. Many men drink exclusively from habit and not from desire for intoxicating effects. Many again plead business necessity; others, lowered nerve tone, and whip themselves to greater effort, forgetting that in the lash of the whip is hidden a scorpion's sting. And some fools who have been cured touch, handle and taste in cold blood to see whether they really are cured, often with disastrous consequences that are likely to follow playing with fire.

A popular fallacy with the alcoholic is the progressive conviction that, in consequence of a long period of good behavior he is entitled to a spree. This applies to patients who are willing to take a six months' voyage on a sailing vessel innocent of liquor, or be interned in a sanatorium, perfectly happy and apparently without desire, but living on the expectation of "going on another whizzer," as one patient denominated it, as soon as the ship docks or the sanatorium doors are unbarred.

Many drink in a spirit of conviviality for the frolic of it, on the principle that mad men only scorn the cup. Bad rendezvouchers coochee the weaklings to periodical debauch. But no one cause explains all drinking. Perhaps the dominating impulse among intoxication motives is the desire for abandon, ingential in every human being that finds vent at felicitous season either in legitimate or illegitimate diversions. Some turn to wild nature and work sedulously for eleven months in anticipation of one beneath the branch or by the stream that chatters through the meadow—some to the ball games or golf links, or the voyage on a favorite yacht. This tendency to dissipation was conspicuously exhibited in the Elizabethan period by the great thinkers of the age who descended at times from their intellectual thrones at Oxford and Cambridge to debauch themselves in the moral mud of London. I once took to task a Boston clergyman of note, my angling companion, for profanely deploring the escape of a large trout, and was told by way of excuse that the utterer of oath was on a moral vacation. Similarly, multitudes of periodical drinkers abandon themselves at convenient intervals to moral vacations whose mental delights they color with alcohol amid the psychological stimuli of a convivial environment.

Such is coney-caught human nature; and these are the psychic causes of alcoholic indulgence that an observer through many years of study has inferred. In conflict with the variform psychology, drugs are powerless. Objective entreaty, affection for wife and child, business interests, impending breakdown and threatened dementia—all take the foil in impotent protest. As the causes are mental and it is the mental effect the drinker seeks, the disease must be grappled with through mental instrumentalities. And there is nothing in the several psychological attitudes that offers the slightest obstacle to the currents of soul power when undammed by dynamic suggestion. The physical effects, the ravages of the poison demand for their removal the intelligent and fearless application of remedial measures that long experience

has proved to be operative. The drunkard temporarily cured of his thirst is not, in a rational scheme of treatment, to be turned loose into the world handicapped by toxins, crippled organs, or shattered brains. Months may be required fully to repair the damage inflicted and panoply the drinker against all danger of physical temptation. It cannot be done in days, as a hundred and one enthusiasts advertise. There is a great difference between sobering a drinker with cathartics and permanently curing him.

It has been shown that abundant adequacy exists in the man to destroy any and all abnormal craving of his objective nature, and that this dormant power may be awakened and exploited by suggestional appeal. The suggestions given in drink habit cases must be iconoclastic and uncompromising, for radical cure depends on change in the mental state.

The patient is conducted into the subliminal sphere, and then assured that, in accordance with his own desire, he has lost all craving for stimulants, that alcohol in any form is a virulent poison, and, as a safeguard, that he cannot swallow it, cannot carry the containing glass to his lips. The society of dubious trencher-friends is tabooed; the pleasures associated with drink and the glamour of the bar-room are pictured as meretricious and placed in vivid antithesis to the chaste delights of home life. The physical, mental, moral, and economic bankruptcy that accompanies intemperance is held up with realistic cogency before the view of the sleeper, and he is forced to the conviction that begotten of this apprehension has come into his soul an abhorrence for drink and all that it stands for. He realizes the presence of efficiency within him adequate to the enforcement of radical abstinence as the principle of his life; and he is rendered insensible, for the future, to any such combination of desire and opportunity as has usually constituted temptation. So he is constrained instantaneously to scorn recourse to alcoholic stimulants for any reasons, and to depend exclusively, under mental or physical

strain, on the units of energy legitimately manufactured out of nutritious food, non-intoxicating drinks, air, exercise and sleep.

Constructively, the sub-personal mind is then directed to the occupation or the diversions, or both, as circumstances suggest; the idea that better work can be done under the influence of alcohol is dispelled; the nervous suffering and dangers that usually wait upon sudden abstinence are stood abeigh; and a career of wholesome activities and satisfactory success is imagined as the legitimate result of the abandonment of the compromising habit. The patient is left asleep an hour or more in the atmosphere of these convictions.

Your speaker has treated in this way persons who came to him unwillingly, who entered the sleep reluctantly with pronounced mental reservation, even men who defiantly sneered at his proffers of help. In many such cases, he has overridden a righteous impulse to eject them from the office, placing love for the sinner before hatred of the sin, has brought the subject into his own presence, made him aware of his obligations with his power to meet them and disclosed to him an earnestness and sincerity of purpose in the effort at reclamation. Such a patient generally emerges from the first sleep, always from the second, a changed being and happy in the change. The surly ruffian who had to be handled with the utmost finesse, is transformed into an affable and appreciative gentleman.

A psychological explanation of the difficulty experienced in regenerating certain persons is to be found in a change of personality on the subjects under treatment, with an accompanying change of behavior so marked as to intimate that a single organism is the abode of two distinct selfs. In offering suggestions, I have sometimes been interrupted by an alternating phase of the personality addressed, which replied to my impulsions in daring contradiction or threw the subject into a convulsive tumult. Two young women came to me last spring to be cured of alcoholic intemperance. Though only

in the thirties, both had served ten years' apprenticeship to excessive indulgence and both had seriously injured the brain. To each was given in a state of perfect suggestibility the uncompromising suggestion that whiskey thereafter would be a deadly poison and its ingestion would be followed by vomiting and serious illness. As a rule, women who drink are more unreasonable than men, and more susceptible to the dictation of alternating phases. Both these patients under the pressure of moral dejection, played the Jekyll and Hyde act, both became dipsomaniacal at the bidding of a rebellious self-fraction, and both paid the penalty of the outraged suggestion above, through the active protest of an all-powerful, otherwise cohering personality. One reported at my office in a state of collapse, and was interned and cared for by my nurse. The other lady, after drinking a half pint of whiskey, was similarly affected at home, with the addition of lanciating pains over her whole body. She thought she was at death's door, sent for me, and was surprised to learn that she could not trifle with a suggestion accepted by her higher self without disastrous consequences.

The rational treatment of alcoholic addicts has been characterized as physio-psychic. This means that it does not lose sight of the necessity for physical repair. It recognizes the interdependence of brain and psychic offices, for in the light of modern science, "bodily and psychic functions are only different forms of the same brain and nerve activity." The successful carriage of the suggestions offered depends then on the integrity of these organs.

The pathology of alcoholic inebriety may not be discussed here. Be it understood, however, that the use of alcohol, at first stimulating, tends soon to diminish physical force as well as enfeeble mental faculties. Every debauch means a lowered sense tone, a partial functional paralysis of blood vessel sheaths somewhere or everywhere in the body, a deranged circulation with diminished absorption of nutrient substances and concomitant atrophic

changes in cell protoplasm. Alcoholic patients also suffer from indicanuria. Putrefaction products absorbed from the intestine poison the brain and so render resistance to temptation all but impossible. The alcohol, moreover, inhibits the elimination of these toxins, and so is established a vicious circle of causes that promote organic changes, notably in the heart muscle. Constant alcoholic anaesthesia shortly leads to mental reduction and finally to dementia. Nothing can be more pathetic than the sight of a man, once brilliant and successful, prematurely losing his value in the business world and rendered utterly irresponsible by drink.

These physical conditions are not overlooked by the conscientious practitioner, and response to the treatment accorded them is always suggested by the psychotherapist.

The psychological cause for alcoholic excess is not infrequently emphasized by the depression and nervous irritation resulting from the abuse of tobacco.

Physicians who have had much to do with alcoholic inebriates realize that there is a direct relationship between alcohol addiction and such abuse. The first effect of tobacco smoking is stimulating, with a rise of blood pressure; a sedative effect follows, with a fall of blood pressure; and if the smoking be continued, the nerve cells are depressed. The depression is cumulative in the system of the smoker, and after a varying interval (of days, weeks or months) it creates an instinctive demand for the antidote to tobacco poisoning—and that is alcohol. The intemperate use of tobacco thus explains 75 per cent of all drink habit cases. The alcoholic thirst is engendered and inflamed by smoke.

The real danger in smoking consists largely in the habit of inhalation, whereby the volatilized poisons are brought into immediate contact with at least 1000 square feet of vascular air-sac walls in the lungs, and are thus promptly and fully absorbed, to be diffused into the blood and carried on their disastrous errand to the several organs of the body.

These poisons include, besides the chief active constituent, nicotin—ammoniacal vapors that dry the throat and liquefy the blood, carbon monoxid or illuminating gas that induces a drowsy, dizzy condition and disturbed heart action, carbon dioxid or carbonic acid gas, prussic acid in combination, sulphuretted hydrogen, and irritant aldehydes—all virulent nerve poisons, capable in a concentrated conjoint action of paralyzing the muscles of respiration and so causing death. Of the aldehydes, the one known as furfuraldehyde, found in inferior alcoholic drinks and said to be 50 times as poisonous as alcohol, occurs in the smoke of cheap cigarettes. According to experiments recently made in London, the smoke of a single Virginia cigarette is likely to contain as much furfuraldehyde as 2 ounces of whiskey.

Inhalers of tobacco smoke are listless, forgetful, independable, backward in study, and conspicuously lacking in power of attention and application. A patient who began to smoke at seven and smoked all the time he was awake until, as he described it, he “got a jag on the smoke,” at 35 could not “pin himself down to any business.” As the habit is pushed, the habitue becomes excessively nervous, suffers from shortness of breath, muscular cramps and tremblings, rapid and irregular heart, nausea, giddiness, insomnia, irritable throat (“cigarette cough”), impaired digestion, and often from dimness of vision which has been known to culminate in blindness (tobacco amaurosis)—all of which disappear with discontinuance of the habit.

Gravest of all the resulting evils is the lessening or complete loss of moral sensibility, with a conspicuous tendency to falsehood and theft. The moral propensities are eventually destroyed because of the destruction of those elements of the brain through which moral force is expressed. The victim degenerates into a sallow, unmanly, irresponsible incompetent, in splendid fettle for the penitentiary or the asylum. Such is the influence on character of the cigarette habit, which has developed into a form of moral insanity. Alcoholism cannot be cured

until the inhalation habit is disposed of, and it cannot be disposed of without objective authorization by the patient. If there be mental reservation on this point, the smoking will be resumed and relapse be practically certain.

The government has begun a most meritorious campaign against drug-taking in the enforcement of the Harrison law. But it has left unnoticed two habits that are doing infinitely more damage to the brains and physical constitutions of the people of the United States than all the drugs put many times together, viz., the drink and cigarette habits. Three times the amount of our national debt (about \$3,000,000,000) is spent annually in the country on alcoholic drinks and tobacco. Twenty billion cigarettes, it is estimated, are smoked every year in the United States. Boys and girls, men and women, are permitted without protest from high quarters to destroy their mental faculties and moral propensities by this practice. Physicians have come to realize that those who abandon themselves to the double indulgence in tobacco and alcohol are practically committing suicide on the installment plan. They can never be at their best, and a cigarette smoker represents as hazardous a risk from the viewpoint of life insurance as a consumer of liquor.

In closing, let me insist on one fact, viz.: The ill-success of a given suggestionist in the treatment of an alcoholic or drug addict, does not imply that such a subject is incurable through psycho-dynamic influence. The sufferer should make trial of another personality. Especially is this to be considered in the failures of Emmanuelism, so noble in its conception and so successful in the hands of its founder, where cures are attempted by unqualified clergymen who are ignorant of the mental states in which receptivity is at its height, and apply extremely crude methods with faith in their efficacy. The same criticism applies to the quixotic efforts of theotherapy and the tedious procedures of psycho-analysis.

HEINE-MEDIN'S DISEASE—WITH MEDIN'S ORIGINAL DESCRIPTIONS.

BY SMITH ELY JELLIFFE, M. D. and E. A. DEDERER, M. D.

THE history of anterior poliomyelitis has been one strewn with many surprises. In looking over the various early works one can well understand why some German writers have wished to call it the "Heine-Medin Disease." Any one who has read the original monograph written by Heine sees therein practically all the information that we had upon the disorder up to the present epidemic which has resulted in enriching our knowledge so extensively.

Heine's work is available to most of us but Medin's work, because of its being published in the Swedish language, has never been made available, and yet Medin, as early as 1896, antedated nearly all of the work of the present investigators. It is because of the importance of this work that the following translation has been prepared.

I am indebted particularly to Dr. E. A. Dederer for her generous assistance in making this possible.

INFANTILE PARALYSIS—WITH SPECIAL REFERENCE TO THE ACUTE STAGE.*

INTRODUCTION AND HISTORY.

Almost every physician has come across some case of flaccid paralysis, with a history of sudden onset during early childhood, and presenting marked muscular atrophy, coldness and cyanosis, absence of tendon reflexes, and of response to faradic stimulation, and not infrequently deformities, such as club foot, for instance. The muscles

*O Medin. (Nordiskt Medicinskt Arkiv, 1896. IV.)

or groups of muscles affected vary in different cases, the lower extremities being most frequently attacked, but the upper extremities and even the muscles of the abdomen are not exempt. Whatever the seat of the lesion the mode of onset and the cardinal symptoms are invariably the same. The deltoid paralysis and paralysis of the muscles of the arm, with atrophy and the other signs enumerated belong to the same group. There can be no doubt as to the identity of the affection, and the clinical picture is so distinct that one should be able to recognize it in any form, especially at the present time when our knowledge of nervous diseases is so far advanced. Neurologists have now demonstrated that the pathological changes producing this form of paralysis are in the cells of the anterior horns of the spinal cord, but until recently we have not understood the true nature of the disease, as a glance at the literature on infantile paralysis will show. Although my intention is not to write a monograph on infantile paralysis, but to describe some of my own clinical observations, a short review of its history may be useful.

It is customary to refer to Underwood's *Treatise on Diseases of Children*, (London, 1784) as containing the first description of the disease, but I, for my part, have never been fortunate enough to see a copy. However, the fourth edition of Underwood's book, 1799, contains a chapter on "paralysis, or palsy." It is evident that he had observed cases of paralysis in children, but he gives very sparse information as to the nature of the affection.

The same is true of another English observer, Shaw, who mentions paralysis in childhood in his "Nature and Treatment of the Distortions," 1828. The first clinical description of infantile paralysis is given by Badham, in the *London Medical Journal*, 1836. He concludes the report of his four cases with the question: "What is the cause of this disease, and how should it be treated?" It was this article that led the prominent orthopaed, Jacob Heine, of Canstatt, to study this form of paralysis, and to publish in Stuttgart, 1840, an epoch-making

article entitled: "Beobachtungen über Lähmungszustände der unteren Extremitäten und deren Behandlung." It was not until 1840 then that we could speak of Infantile Paralysis as a medical unit. Heine reported 28 cases, 27 involving the lower extremities, and only one case in which the arm alone was affected, and it is noteworthy that he included this case. He had never seen the acute stage, but draws a clear picture of the chronic stage with the flaccid paralysis, the atrophy, coldness and especially the deformities.

Heine believed that the pathological process causing the paralysis attacked the spinal cord, and based this belief upon the symptom complex, as well as upon the post mortem findings described by Hutin and Ollivier. He attached more importance to the exudation of spinal fluid than to the atrophy of the spinal cord.

In France the first writers to describe the disease were Rilliet and Barthez, who in "Traité des Maladies des Enfants," 1843, give a very inadequate description of one case, in which the patient died of pneumonia a few months after the onset. The post mortem examination revealed nothing abnormal in the spinal cord; the authors, therefore, concluded that the nervous system is not affected, and they call the disease "paralysie essentielle de l'enfance."

In an article published in *Gazette Medicale*, 1851, Rilliet adheres to this view in the face of the observations made by Heine, Kennedy, West and others. This article appeared later in Rilliet & Barthez's Textbook on Children's Diseases, and is to a great extent responsible for the erroneous attitude of the medical profession in regard to the pathological anatomy. Even as late as 1880 cases of infantile paralysis were demonstrated here as Rilliet's essential paralysis.

Duchenne, of Boulogne, devotes a chapter in his clinical work, "L'Electrisation localisée," to infantile paralysis, under the name "paralysie atrophique graisseuse de l'enfance." In a most excellent description of the atrophic stage, he calls attention to the importance of the faradic re-

action for prognosis, as well as for diagnosis, as it is essential to differentiate early between the muscles which have completely lost the faradic contractility, indicating a permanent paralysis, and those in which a slight contractility indicates a possible restoration of function. Duchenne lays stress upon the fact that the loss of the faradic reaction in *atrophic* paralysis is in contrast to all forms of *cerebral* paralysis, where the faradic reaction is retained. Duchenne had never observed a case in the acute stage, nor had he ever made a post mortem examination. Nevertheless, it was clear to him that infantile paralysis is due to some affection of the spinal cord, whether apparent at the autopsy or not, and he based his opinion upon the striking analogy between the symptoms of a traumatic lesion of the cord and infantile paralysis. In 1860 Heine gave a very clear description of 158 cases in his book "Spinale Kinderlähmung," but, except for calling attention to the lower temperature of the affected limb, this work contains no facts not already brought out by Duchenne. Heine could not, even at this time, prove the spinal origin of the disease by any pathological anatomical changes.

Cornil and Charcot demonstrated before the Societe de Biologie in Paris, in 1864, the atrophic changes in the anterior horns, but overlooked the essential, namely the degeneration of the cells of the motor ganglia, which Vulpian and Prévost were able to demonstrate later in the same year.

We are indebted to Charcot and Joffroy for the best description of the pathological anatomy of the *chronic* stage. They found the ganglion cells absent or degenerated, and the neuroglia atrophied and sclerosed in some cases, and intact in others. The atrophy of the anterior spinal roots, and the anterior lateral columns they regarded as secondary changes. The atrophic muscles corresponded in all cases to the localization of the process in the spinal cord. From these changes Charcot concluded that infantile paralysis is due to an inflammatory process attacking first the motor-ganglion cells, that is to say,

from a pathological-anatomical point of view it should be regarded as a tropho-myelitis, or anterior acute polio-myelitis.

The pathological changes in the acute stage are best described by Rissler, *Nord. Med. Ark.* bd. XX, n. r. 22. Later investigators, Redlich, Goldscheider, Siemerling and Dauer have given descriptions differing in no particular from Rissler's.

Important clinical observations were Erb's reaction of degeneration and Westphal's disappearance of the patellar tendon reflex.

In the past few years, attempts have been made to produce an anterior poliomyelitis with atrophy and paralysis of the posterior extremities in rabbits, by means of injections of streptococci erysipelates (Roger, bac. coli 'Gilbert and Lion) and a mixture of bac. coli and staphyl. aureus. Such experiments may prove of interest for the etiology, but have no direct bearing upon infantile paralysis.

Duchenne and Heine were the first to describe the cerebral spastic hemiplegia in children. Later observers have called attention to the short febrile stage preceding the onset of the paralysis, and similar observations have been made in acute polyneuritis. That three such different forms of paralysis should have a similar onset was first remarked by Strumpel who suggests the possibility of a common etiological factor. In his opinion infantile paralysis, spastic hemiplegia and acute polyneuritis are merely manifestations of different localizations of the same pathogenic organism. (*Deutsche Archiv. f. klin. Med.* Bd. XXV, 1884.) This is the most momentous question of all and will, I hope, be elucidated by my case histories. These three affections should then, according to Strumpel, be classified with infectious diseases, and this view has gained many supporters during the past decade, though simply exanalogia, as anatomical proofs have been lacking.

Vizioti pointed out in 1880 the similarity in the course and onset of cerebral hemiplegia and infantile

paralysis, but owing to the inaccessible language his communication remained unknown until Pierre Marie referred to it in 1892.

Before the International Medical Congress in Berlin, 1890, I reported my observations of the epidemic of Infantile Paralysis in Stockholm, 1887, but only very meagre references to my address have appeared in the foreign literature and, I regret to say, indicating some scepticism, some even doubting that the epidemic was one of true infantile paralysis. My address has appeared *in extenso* in Hygiea, but, again owing to the language, has been unknown by the foreign observers and authors. I have, therefore, determined to give in detail the history of each case observed, and my views regarding the acute stage of the disease. Since 1887 I have seen many cases, the majority presenting the characteristic clinical picture, but also many deviating from it, and I am convinced that from an etiological point of view, they are identical. It now remains to convince others of this fact. Apparently one important link in my chain of evidence was lacking, namely the simultaneous occurrence of a great number of cases whose connection can be demonstrated, as during the years 1888 to 1894 the disease occurred only sporadically. I was therefore inclined at first not to include the sporadic cases in my report, thinking that they would apparently not help to convince those who doubt the correctness of my observations and views, but having in the present year witnessed another epidemic in Stockholm and its suburbs, I feel confident that all the material which I have collected will be of value by throwing light upon the great variety of forms in which the disease appears and upon the widely differing changes which it causes in the nervous system.

Nothing is more valuable than the clinical observations, therefore I give them in full, so that the reader may decide for himself whether my conclusions are correct. I repeat that in the following report of cases, I have purposely included both the typical and atypical cases, and in the latter have emphasized and described more

fully the symptoms which are apparently contradictory, and which give only a very obscure indication of the localization in the central nervous system. For the typical cases it suffices to note (1) that they have occurred, and (2) when they have occurred.

The cases are recorded in chronological order, so as to show the course of the epidemics. Four of the cases only were seen in private practice, 3 in 1887, and one in the fall of 1895; the rest of the cases were seen in the Children's Clinic and the Polyclinic.

CASE RECORDS EPIDEMIC 1887

The first five cases presented the ordinary characteristics of infantile paralysis. The first three did not occur during the epidemic.

I. Female, aged 2 years and 4 months. First seen June 29. No premonitory general malaise or fever. Diagnosis: Infantile paralysis, tibialis ant. right leg.

II. Female, aged 1 year and 9 months. Onset in May. First seen November 26. Fever, pains in both legs. Inferior paraplegia. Diagnosis: Typical infantile paralysis.

III. Male, aged ten months. Onset May 1. First seen October 1. Fever in acute stage. All four extremities paralyzed. Diagnosis: Typical infantile paralysis.

IV. Male, aged 2 years and 3 months. Onset July 17. First seen July 28. Febrile stage lasted 4 days. Inferior paraplegia. Diagnosis: Typical infantile paralysis.

V. Male, aged 6 months. Onset July 17. First seen August 17. Febrile stage 8 days, vomiting and diarrhoea; inferior paraplegia.

VI. Female, aged 3 years. Onset August 1. Observed August 10. Febrile stage which lasted 4 days, marked by violent pains in both legs, walking very difficult, extreme tenderness in legs, so that child would not allow them to be touched. Restless, cried much at night. Could not stand after the third day. Slight contractures in both legs. The paralysis increased after the temperature became normal.

Aug. 10. Slight contractions in the muscles of the hip and knee joints. Hyperaesthesia of the skin. On palpation of muscles and nerve trunks, violent pains. Cannot stand alone, but with assistance can stand on right leg. Patellar reflex present on right side only. Abdominal reflex normal, plantar reflex diminished. Partial reaction of degeneration. Sense of touch normal. Constipated.

Aug. 18. No contractures, both legs perfectly flaccid and straight. Less tenderness. Can lean on left leg with assistance. Patellar reflex present on both sides. Degeneration reaction in both legs.

Sept. 18. No tenderness. Mobility increases.

Oct. 2. Normal motion reestablished under the use of galvanic electricity. Patient cured. Diagnosis: Infantile paralysis (acute polyneuritis.)

VII. Male, aged 3 years. Onset Aug. 9. Observed Aug. 14. Fever one day. Vomiting, somnolence and restlessness during a few days. Inferior paraplegia. Muscular tenderness. No improvement on October 9. (Compare with Case X.)

The following case proves definitely that infantile paralysis may appear in the form of simple facial paralysis.

VIII. Male, aged 4 years. Onset Aug. 9. Observed Aug. 26. In the early part of June had measles. No other illness. Never had any ear trouble. On Aug. 9 was taken ill with chills and fever, was stuporous and very restless. A few days after the onset the child awoke suddenly, screaming with pain. The following morning the right side of the face was paralyzed. The child was constipated.

Aug. 13. A laxative was administered. The paralysis was confined to the face.

Aug. 26. When first seen by me, the child, well developed, of healthy appearance, showed no paralysis in legs, abdomen, tongue, or eyes. All muscles supplied by the right facial nerve paralyzed. Result of electrical examination: Right side: Faradic; no response by nerve or muscles. Galvanic: nerve does not respond, muscles

do not respond to cathodic closure current, but faintly to the anodic. Left side: Normal. Diagnosis: Infantile paralysis (facial monoplegia.)

IX. Female, aged 9 months. Onset August 11. Observed August 18. During initial stage, no fever, but marked somnolence. One arm paralyzed the following day. On August 18, the deltoid and the muscles of the arm paralyzed.

The following case, X, is of especial interest. The child is the brother of Number VII. This illustration of "family epidemic" is further of interest in that the first case ran a typical course while the second showed, besides the ordinary paraplegic, paralysis of the facial and oculo-motor nerves.

X. Male, aged 1 year and 4 months. Onset August 13 with somnolence. The following morning, inferior paraplegia; during the day left facial paralysis developed. Sighing, respiration and persistent somnolence. On the morning of August 15 a meningeal cry, otherwise no signs of meningitis.

Aug. 15. The child was first seen by me on this day. He is easily roused, but does not recognize anyone. Marked pallor. Trousseau's sign not present. No sensory disturbances. The left eye half open. The position of the eyes normal, but coordination imperfect. Nystagmus of both eyes, more marked in the left. The pupils contracted, equal, react to light, though sluggishly on the left side. The fundus of both eyes normal. Tongue, uvula and soft palate normal. Normal motion in right arm, and in the fingers of the left hand; slight motion in left forearm, none at all in the arm. Slight active motion in the legs, but the child cannot stand or walk. Both patellar reflexes lost. Abdominal and cremasteric reflexes normal. Pulse small, regular, 120. Temp. 39°. Urine normal.

Aug. 16. Somnolence. Pulse 100. Temperature 39° to 37.6°. Can stand when assisted. No defecation since August 13. Castor oil ordered, and antifebrin 5 b. i. d.

August. 18. Less stuporous. Wants to eat. Can stand more firmly on both legs. Left arm still paralyzed, but can close the left eye better. No nystagmus. Pupils remain equal. Temperature normal. Reaction of degeneration in left side of face.

August 21. Child begins to play; otherwise condition is unchanged.

August 24. Can stand and walk without assistance. General condition good.

Improvement continued so that only a slight disability remained in the left arm, and the left side of the face. Diagnosis: Paralysis infantilis spinalis, facialis et oculo motor.

XI. Female, aged 1 year and 4 months. Onset August 13 with fever, somnolence and constipation.

August 17. Both legs paralyzed, painful to touch.

August 18. Knee joints contracted, cries much when attempt is made to straighten them. Active motion difficult. Right facial paralysis. Eyes normal. Child otherwise healthy and lively. Diagnosis: Infantile spinal paralysis (polyneuritis?) and facial paralysis.

XII. Female, aged 5 years. Onset August 13. Febrile stage lasting 5 days.

August 19. Flaccid paralysis of right leg.

The following case presents the interesting picture of typical infantile paralysis accompanied by polioencephalitis, left sided cerebral hemiplegia and abducens paralysis.

XIII. Male, aged 11 months. Onset August 17. Past history negative. The child could stand and had already begun to walk alone. Onset marked by vomiting and diarrhoea, but no fever and somnolence until August 22. The following day it had a convulsion. When seen on August 24, sighing respiration, stupor, Trousseau's sign positive, pupils dilated and reacted sluggishly. No paralysis or contractures. Pulse rapid, regular.

August 26. Clonic contractures in left arm and leg. Could not stand.

August 27. Temperature normal and general condition good, but convergent strabismus was noted. The following day muscles of left elbow joint contracted.

September 10. Athetoid movements of left hand and of the toes of the left foot. Drags left foot when he walks. Electrical reaction normal on both sides. The triceps tendon reflex present on left side, but not on the right. The patellar reflex normal on both sides.

September 12. Contractures in left elbow joint less marked. Motion of left hand normal.

September 15. Athetoid movements of left foot when he attempts to walk. Occasional left internal strabismus. Diagnosis: Acute polioencephalitis with left sided hemiplegia and paralysis of the left abducens nerve.

XIV. Male, aged 2 years and 7 months. Onset August 18. Seen November 22 after the febrile stage. Head and all four extremities paralyzed.

November 22. Both arms paralyzed. Motion of hands normal. Diagnosis: Infantile paralysis.

XV. Male, aged 7 months. Onset August 20. Seen September 3. Fever, followed by paralysis of left arm. Diagnosis: Infantile paralysis.

The following atypical case is interesting on account of the absence of paralysis, atrophy and reaction of degeneration in the lower extremities, by the ataxic gait and stuttering speech, indicating that the lesion was not situated in the anterior horns of the cord.

XVI. Male, aged 3 years. Onset August 24. Seen August 27. Past history: Measles 8 months ago. Since the beginning of January, 1887, had suffered from chronic arthritis of left ankle joint.

August 24. Sudden onset, with fever and pains in the extremities. There was no swelling of the joints, no headache, pains in the back, rigidity of the neck, no dysphagia.

Soon after the onset, however, progressive disturbance of speech, ataxic gait and convergent strabismus developed. On August 27 the evening temperature was 38.4°.

After a few days the pain in the extremities disappeared and the child began to play.

September 6. Stuttering and indistinct speech. Internal strabismus of the right eye, otherwise nothing

abnormal about the eyes. The upper extremities are normal. Motion of the lower extremities normal in all directions when the child is lying on its back, but co-ordination is very incomplete. There are no sensory disturbances, no atrophy, no contractures. The patellar reflex is diminished on both sides, but the abdominal and cremaster reflexes are normal. Electrical reactions normal.

November 25. Gait improving. Strabismus has not yet disappeared. Child otherwise healthy and bright. Diagnosis: Infantile paralysis, (acute locomotor ataxia and paralysis of the abducens nerve.)

XVII. Female, aged 5 months. Onset August 20. Diagnosis: Typical infantile paralysis.

XVIII. Male, aged 3 years and 4 months. Onset August 27. Febrile stage lasting 8 days. Paraplegia inferior.

September 19. Right leg paralyzed. Right arm normal. Atrophy and degeneration reaction in right leg.

XIX. Male, aged 3 years. Onset August 28, marked by fever, tremor in hands and legs, somnolence and retraction of head. The child complained of pains in the legs, and cried when touched. Constipation, retention of urine for 24 hours. The tenderness in the legs persisted for two weeks. After this time he could walk, but not run.

November 26. Uncertain gait, falls down frequently. In dorsal decubitis normal motion. All reflexes more marked on the right side. Slight atrophy of left thigh.

Electrical reaction: Right side: Both muscles and nerves react somewhat sluggishly to the faradic current. The galvanic response: faint in crural nerve, and in quadra extensor. Anodal reaction more distinct than the cathodal. Tibial anterior reacts normally. Left leg normal.

There is no doubt that this is a case of infantile paralysis, though the chief disturbances were centered in the peripheral nerves and not in the anterior horns.

The polyneuritic nature is further indicated by the incoordination and the hyperalgesia.

XX. Female, aged $1\frac{1}{2}$ years. Onset August 30. Fever during three days, followed by paralysis in the left leg, and diminished motion in the right.

XXI. Male, aged 10 months. Onset September 1. Inferior paraplegia. Typical infantile paralysis.

XXII. Female, aged 3 years. Onset September 3, admitted to Children's Hospital September 8. Death, September 9.

The onset was marked by fever, sore throat and pains in the back.

When first seen, September 5, the child complained of sore throat. Upon examination, the larynx was found normal. The child looked ill, and had fever, but no local signs were noted.

The following day the child could not walk, but could stand when supported, though it then complained of pains in the legs.

September 7. Somnolence. The right leg was completely paralyzed, the left partially. Stabbing pains in the legs. No symptoms of meningitis. No defecation since September 5.

September 8. Stuporous, spoke distinctly when aroused. Pulse rapid but irregular. The neck was not rigid, there were no contractures. Eyes normal. The upper extremities normal. Complete flaccid paralysis of the lower extremities, with loss of patellar reflexes. Feet cold. Castor oil administered with good results. The evening temperature was 38.4°C .

September 9. Comatose. Retraction of the head, but no rigidity of the neck. Nystagmus. The right pupil dilated. Pulse rapid, regular. Temperature 41.4°C .

At noon the child became cyanotic. Dyspnoea and trachea rales. In spite of stimulation the patient died at 2. p. m., that is, six days after the onset.

Post mortem examination:

BRAIN: The dura mater slightly congested, the other membranes transparent. A slight amount of clear fluid

in the subarachnoid space. The white matter is congested, with areas of rose-red color. The grey matter is sharply demarcated from the white substance, and presents a perfectly normal appearance even in the motor areas. The lateral ventricles are not distended. The ependyma is not thickened. The basal ganglia, cerebellum, post and medulla oblongata present a moist and congenital surface when cut, otherwise nothing abnormal.

SPINAL CORD: The dura mater is congested, especially in the lower portion, with signs of a recent hemorrhage in the lumbar region, over an area 2 cm. long, anteriorly. The soft membranes appear normal. The cord feels firm. Cross sections, made at a distance of 2 cm. show in the cervical region, a brownish red color of the anterior horns; dorsal region normal; in the lumbar region a brownish red discoloration of the anterior horns, with red lines radiating through the white substance; the anterior horns are swollen so that they are raised above the rest of the surface.

The posterior horns are normal throughout.

The changes are more intense and begin higher up on the right side. At the point where the changes begin, a hemorrhage, the size of a pin head. A portion of the crural nerve was examined microscopically, and showed a diffuse redness in the medullary sheath over an area one centimeter long.

THE THORAX: The lungs contract normally when the thorax is opened. The pleura normal. Several punctate hemorrhages beneath the pleura. The posterior portions of the lungs congested. The bronchi and trachea contain a slight amount of mucus. One drachm of clear fluid in the pericardium. The left ventricle is contracted, the right contains dark, viscid, and some coagulated blood. The myocardium is of a greyish color. Underneath the endocardium, in the left ventricle, close to the mitral valve several punctate hemorrhages. The blood is dark and viscid.

THE ABDOMEN: The spleen is soft, not much enlarged, the cut surface is dark red, and the parenchyma is brittle.

The liver is soft, cut sections show the parenchyme indistinctly defined. Kidneys normal, except for a yellowish grey color, and loss of outline around the base of the pyramids. The mucous membrane of the small intestines is congested, the solitary follicles and peyer's patches are enlarged, also marked hyperaemia of the follicles and mucous membrane of the large intestine. The mesenteric glands are enlarged.

To sum up: The pathological, anatomical changes consisted in:

CEREBRAL HYPERAEMIA, hyperaemia and hemorrhage in the spinal dura, acute anterior poliomyelitis, ecchymosis of pleura and endocardium (myocarditis?) acute hepatitis and splenitis, peribasal nephritis, and follicular enteritis. (The microscopic examination will be noted in a later chapter.)

In the following case, the entire body, with the exception of the right side of the face, was paralyzed. Note especially the transitory disturbance of the respiration.

XXIII. Male, aged 1 year and 7 months. Onset September 4, with fever and general malaise. The child was better on the two following days, but got worse again on the 7th. On the 8th it had high fever and wanted to sleep all the time, but did not complain of any pain until the 9th, five days after the onset.

September 10. The mother noticed that the child could neither stand nor sit up, and later during the day that the mouth was drawn to one side, and that the child could not hold the head up. During the night, convulsions, preceded by vomiting.

September 11. Stupor, chronic contractions, especially of left arm. Enema given with good results.

September 12. Comatose, Retention of urine for 24 hours. No defecation. Muscular tremors less marked.

September 13. Respiration normal. Surface temperature normal. Cries when touched. Muscular tremors have ceased. Paralysis in the muscles of neck and back, and in those innervated by the left facial nerve. Paraple-

gia. Very slight motion in the right arm, the right leg, and in the fingers of the left hand. All cutaneous and tendon reflexes abolished. Anorexia. Passes the normal amount of urine.

September 14. Dyspnoea; shallow, rapid respiration, 56; pulse small, 120; otherwise condition is unchanged.

ELECTRICAL REACTION: No response to galvanic or faradic current from the muscles of the extremities, or from the left facial nerve or its muscles.

September 15. Respiration deeper, 24. Pulse normal, 100. Less stuporous.

September 17. Brighter, begins to move left arm and leg. Degeneration reaction in muscles of the left side of the face.

September 19. Can now move the head and turn over in bed.

Steady improvement, so that in the middle of October only the facial paralysis remained.

DIAGNOSIS: Infantile paralysis, with diffuse acute anterior poliomyelitis, paralysis of the left facial nerve, and possible involvement of the vagus.

Compare the following case with No. VIII.

XXIV. Female, aged 1 year and 9 months. Onset September 6. After an attack of diarrhoea, lasting 14 days, the child came down on September 6 with fever, and somnolence and pain in the legs. No movement of the bowels for 4 days.

September 10. Somnolent. Left side of face paralyzed. Eyes and pharynx normal. Extremities normal.

September 16. Condition normal, except for paralysis of left side of face.

XXV. Female, aged 2 years and 5 months. Onset September 8. Somnolent and cranky for a few days. Paralysis of right leg.

The following case presents a spastic paralysis, and is further of interest as a younger brother died at the same time from acute infantile paralysis.

XXVI. Male, aged 3 years and 1 month. Onset September 9. Past history, chronic indigestion. Onset with fever, somnolence and pain in the back.

September 13. Could not stand alone. Tremor and contractions in extremities. Profuse perspiration. No movement of the bowels for four days.

September 15. Defecation. Less somnolent, began to move legs. Out of bed the following day.

September 23. Slight paralysis of the lower muscles of the face of the right side. Gait uncertain. The patellar, plantar and cremasteric reflexes exaggerated. No atrophy. Tenderness on palpation of the muscles.

September 29. No signs of facial paralysis. Gait improved but still ataxic. Exaggerated knee jerk. No reaction of degeneration. Diagnosis: Infantile paralysis, acute locomotor ataxia and monoplegia facialis dextra.

The following history was obtained of the brother:

Age, 1½ years. Always well until September 4, when he developed high fever. During three days stuporous, complained of headache and pain when he moved the head. During the night between the 7th and 8th became paralyzed in arms and legs, passed into coma and died after 24 hours.

XXVII. Male, aged 7 months. Onset September 12. Paralysis of right arm and deltoid muscle, after febrile stage lasting 4 days. Degeneration reaction present.

XXVIII. Male, aged 1 year and 2 months. Onset September 13. Past history negative. Began to walk one month before onset, which was marked by somnolence, lassitude and profuse perspiration. After two days, general condition normal, but could not stand on his legs.

September 18. Strabismus.

September 23. Flaccid paralysis of lower extremities, with diminution of reflexes. Internal strabismus of **left** eye.

October 7. Strabismus less marked. Can walk alone, but drags both legs.

Diagnosis: Infantile paralysis, with monoplegia of the left abducens.

XXIX. Female, aged 2 years. Onset September 14. Onset acute, with vomiting, fever, somnolence, cried when touched.

September 15. Paralysis of both legs. Retention of urine for three days; the child was then catheterized, since which the urination has been normal. No bowel movement in five days.

September 17. Temperature normal.

September 22. Temperature rose suddenly to 38.9°; general condition worse. Total paralysis, aphasia, but moans when she is touched. Involuntary evacuation of rectum and bladder. Mental condition normal, tendon reflexes absent. The muscles of neck, back and all four extremities paralyzed (except slight motion in left forearm, and fingers of right hand.) Sensibility normal, though slightly increased over abdomen to the legs. Reaction of degeneration. Appetite normal. Sleeps well. Urine normal. Slight bronchitis, otherwise no changes in internal organs. September 23, temperature 38°.

September 24. Normal temperature.

October 6. Began to move the arms a little.

October 19. Could hold the head erect.

October 28. It was noted that the paralysis of right side of abdomen was aggravated. Right side of chest did not expand normally. Retraction of right intercostal spaces on inspiration. During forced expiration, a rounded circumscribed tumor, the size of an orange, was seen on the right half of the abdomen. Percussion elicited a tympanitic note over the tumor. The muscles of the left side of the abdominal wall contract normally.

November 2. Lower extremities completely paralyzed. Can move left arm fairly well, and grasp objects with right hand. Tumefaction in right abdominal wall larger, and more sharply defined.

The child developed diphtheria, which was the cause of death, on November 8, two months after the onset

of the poliomyelitis. The brain and spinal cord examined by Dr. Rissler (No. IV in his report.)

Diagnosis: Acute anterior poliomyelitis with superior and inferior paraplegia and paralysis of muscles of abdomen and thorax.

XXX, XXXI, XXXII: Onset September 17. Fever 3 to 4 days, followed by inferior paralysis.

XXXIII. Female aged 2 years, onset September 21. Since August 30, has been treated for gonorrheal vaginitis at the Polyclinic.

Onset on September 21, with symptoms of tonsillitis, but September 24, it was noted that her legs were weak, though she could move them when in the recumbent position. The temperature became normal on the evening of September 24, but the somnolence persisted for several days. On the 30th, the temperature rose to 39°, and was accompanied by vomiting and diarrhoea.

October 3. Was brought to the Polyclinic. The child could not walk, and would only stand when supported. When lying down she could move the legs fairly well. The patellar reflexes diminished.

October 6. General condition good. Can walk, but gait is spastic. The muscles of the lower extremities flaccid and tender to touch. Tendon reflexes improved. Sensibility normal. Electrical reaction: No response to faradic current, either from nerves or muscles. Galvanic: The crural and peroneal nerves do not respond. Rectus femoris responds to 15 m. amp. and tibialis to 11 m. amp. The anodal closure reaction stronger than the cathodal.

The head, upper extremities, abdomen, bladder and rectum normal.

October 7. Acute nephritis. Anasarka. Albumin and blood in urine. Syr. scill. and Pot. acetate.

October 10. Blood and coarse granular casts. Diagnosis: Infantile paralysis (Polyneuritis with ataxia and spastic symptoms) and nephritis.

This case is remarkable in several respects: (1) Recurrence of the febrile stage after an interval of six days. (2) The paresis manifested itself in uncertain gait

rather than in true paralysis. (3) The patellar reflexes improved during convalescence, although (4) the typical reaction of degeneration was present. (5) The parenchymatous nephritis occurring several weeks after the onset is unusual.

The following is the second case which terminated in death in the acute stage.

XXXIV. Female, aged 5 months. Onset September 23. Chills and fever, with somnolence and green, mucous, fetid stools in a previously healthy nursling. No convulsions. No vomiting. Urination normal. Did not cry much.

September 25. The voice faint, the legs weak.

September 26. Complete paralysis of all extremities, except for slight motion of right foot. Muscles of the neck paralyzed. The eyes are immovable, and have a glassy, staring expression. Aphonia. Reflexes absent. Has not the strength to suck or to swallow, when fed with a dropper. Sensibility apparently normal. The heart beats and respiration regular and calm.

(TO BE CONTINUED.)

NOTES ON THE HISTORY OF PSYCHIATRY. XI.*†

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XX

AETIUS OF AMIDA

AETIUS of Amida¹ was also a compiler like Oribasius, but he has more original ideas in his four books, and shows his superiority over Oribasius in that he holds more to the true theory of the diseases and the consideration of their symptoms.

The principal psychological observations by Aetius are expressed as follows. It is remarkable to note what he says of Phrenitis, which he extracted from Posidonius.²

If the forepart of the brain is affected, then we have a disturbance of the imagination, if the mid-ventricle suffers, then the reasoning power is disturbed, and if the hind-brain is diseased there appears a disturbance of the powers of thought in which imagination and reason are at the same time affected.

The chapter on insanity³ is taken from Archigenes and Posidonius. It is defined: Insanity occurs without fever when much blood, though not decayed, flows to the brain, at other times is clear (pure) and with its plenteousness attacks it alone as in drunken persons. Sometimes, indeed, mixed with yellow bile. Weakness of the head precedes insanity just as in podagra weakness of feet is always present. Then they have pain when the matter flows to the places.

* Continued from Vol. 36. No. 4, Nov. 1915.

† Continuation Friedreich.

Accordingly insanity takes two forms: the first is evidenced by laughing and foolishness if pure blood; and the second by depression and anger if blood mixed with yellow bile has entered the brain. Often without any assistance of the art, the disease disappears through the efficacy of the body and adherence to a strict diet: (that which injures is used up). It may however, appear periodically, once, twice, or oftener in a year because of new accumulations. In men of middle age violent passions, excesses in eating and drinking, digestive disturbances and suppression of draining blood all dispose to this disease.

The treatment consists of light diet, purgatives and blood letting. Sleep must be especially provided for after blood letting. "For when the blood is let, if sleeplessness occurs it is severer and more uncontrolled."

If the disease does not yield to this general treatment then local treatment must be resorted to. Blood letting from the frontal vein; leeches should be applied to the entire scalp, increased excretions by use of sternutatories and the like. Toward the end of the disease, baths and friction rub during the bath and hellebore should be given. If the head is very dizzy, cold water should be applied freely.

The chapter on melancholia⁵ by Aetius is taken from Galenus and Rufus. He first described hypochondriasis which easily passes into fixed misconceptions. He recommends the psychic cure of Philotinus, which was given in Par. XIII.

Rufus explains the fear of melancholia as an inner darkness caused by black bile, for says he, we have fear in darkness. The depressed melancholia is explained as coming from black bile, the violent melancholia from yellow bile. The treatment of melancholia is taken entirely from Galen.

The following⁶ paragraph on lycanthropy is taken from Marcellus (wolf or dog insanity). The description is vivid and because of its historical worth, and because

of the destruction of the writings of Marcellus, deserves to be given here.

"Those who are seized with the so-called wolf or dog disease, go forth at night in February imitating everywhere wolves or dogs and even till daybreak open tombs. You will moreover recognize those affected in this way by the following marks: they are pale and have weak sight and dry eyes and do not shed tears. You will see that they have hollow eyes and a dry tongue and do not drop saliva. They are also thirsty and have badly and incurably ulcerated shins, on account of continual fallings and bites of dogs. And such indeed are the marks. It should indeed be shown that this disease is a form of melancholia and you will treat it at its inception by cutting a vein and by letting blood almost to loss of life and by feeding the patient with foods of good flavor. Use baths of fresh water. Then having used whey for three days he will be purged with the antidote of colocynth of Rufus or Archigenes or Justus taking it again and again at intervals. After the purgings also the antidote for viper bites is to be used and another already mentioned for use in melancholia. If the disease comes on at evening irrigation of the head, likely to produce sleep, is to be resorted to, and also spices of a like nature. The nose should be smeared with opium. In due time also let soporifics be given in drink."

In the paragraph on folly⁷ which should read "when the brain is made colder" he differentiates delirium as follows:

"Folly differs, however, from delirium, folly indeed, both speaks and acts with some (rational) sequence. But delirium has an irrational transition and associates one topic with another in such a way that the second has nothing in common with the first. Delirium occurs mostly in old men. Feeble-mindedness, however, not only in children and youths but also at other ages, follows from certain diseases in advanced stages."

XXI

ALEXANDER OF TRALLES

Alexander of Tralles, contemporary of Aetius and practical physician in Rome, in his work (*De Arte Medica*)⁸ uses the word "melancholia" in its broadest sense. It includes nearly the entire province of diseases.

The manifestations of melancholia are manifold. Some patients are always jolly and happy, others angry and depressed; others are stuporous, some have fixed ideas, others believe they can foretell the future. The disease has intermissions, and then again it is of continuous duration. In like manner the part of the body suffering varies; first it may be the brain, then the entire body and again only the abdomen.

The following people are especially prone to melancholia: Those of bronze color, those of lean build, middle aged, those who have many cares and poor nourishment, and in those in whom the emission of the blood is repressed. Melancholia which arises from⁹ an overflow of the blood is evidenced by a flushing of the face, distended veins and various hallucinations. In this type of melancholia bleeding is the first and most necessary step. In women this should be done at the feet because by this means menstruation is promoted. If the blood has gathered in the brain, then the frontal vein should be tapped.

If the patient is angry or morose, the cause must be ascribed¹⁰ to the bile and not the blood. Bile has passed into the blood vessels. In this type of melancholia purgatives are to be prescribed at once. Very good results are also obtained from the baths.¹¹ In such cases the ancients resorted to the cupping glass, leeches and penetrating unctions which they applied to the head. This method often produced harmful results. "For besides helping them not at all, it makes them more immoderate and drier."¹² It is only in these serious cases that have resisted all other treatment, and cases in which the disease agent has collected in the brain, that we must have recourse to such agents."

In melancholia arising from melancholic blood the patients are depressed, have fear, wish to die, are suspicious even of their friends and commonly have distorted imaginations.

One woman had a fixed delusion that she carried the entire earth on her middle finger and therefore did not dare to move or bend her finger. Beliefs of this kind are treated psychically as Philodotus¹³ did in several instances; in one case he gave a woman, who believed she had a snake in her stomach, an emetic and slipped a snake unnoticed into the vessel into which she vomited, thus curing her of her delusion. Another woman who became melancholic through the separation from her husband was cured by his unexpected return.

Deep rooted melancholia¹⁴ is particularly cured through corporal treatment, baths and drastics. Armenian biting stone is preferable to white hellebore. After the patient has regained strength through proper nourishment, one must provide diversions, enlivenment and occupation. If there are any effects of the disease remaining, one must wait at least a year before the treatment is repeated. The rules for giving Armenian biting stone are found in the following reference.¹⁵

It is to be noted that in another reference¹⁶ in which Alexander discusses phrenitis, he differentiates insanity, called mania by the Greeks, from phrenitis, in that the first is not accompanied by fever, while the latter always is accompanied by fever.

XXII

PAUL OF AEGINA

Paul of Aegina lived about the year 630 A. D. in Alexandria. In his work "De Re Medica" which is mostly abstracted from the older medical authors, he first¹⁷ mentions dementia (Bloedsinn) whose characteristics are loss of memory and reason.

. . . . "When both parts, the mind and the memory, are affected, then arises folly and senselessness, which the Greeks call dullness (fatuity)."

He reduces the disease to poor combinations (intempereries) after the pathology of Galen. Excessive dampness, dryness, heat, etc. are the chief factors. The treatment therefore shapes itself accordingly, namely: where there is excessive dryness moisture is applied; where there is dampness evaporation must be produced, etc.

What Paul has to say on melancholia and insanity, their symptoms, causes and treatment¹⁸ is borrowed from earlier writers, especially from Caelius Aurelianus and Alexander of Trallianus. His classification into three types of melancholia is, however, original. First, brain-melancholia in which the entire brain is affected. Second, general melancholia, in which the entire body is affected; and third, flatulent melancholia, *M. flatuosa*, or hypochondriasis.

The chapter on lycanthropy¹⁹ is copied from the older authors. He speaks of the mental disturbances of those deeply in love²⁰ and says their eyes are dry and sunken, the eyelids are always in quickened active movement, the pulse is weak, etc. Psychic treatment is to be used on them.

XXIII

CONSTANTINUS AFRICANUS

Constantinus Africanus²¹ treats of melancholia in two books.²² "Melancholia is the belief that any evil thing may come."

The next cause is sought, as by many other writers of this time, in a clouding and darkening of the spirit. "For since the fumes of the black bile rise to the brain, and come to the place of the mind, it obscures its light, it perturbs, etc." In the bodily causes especial notice is taken of "warm dry cold combination," *frigida*, and the like. He gives a quite accurate description of religious melancholia. As one type of melancholia he gives melancholia hypochondriasis, whose seat of origin is in the stomach. It is remarkable to note that he resorts to psychic treatment and that he proposes a dissimulation

and abolition of the erroneous and depressive ideas of the melancholics by means of rational diversions (and the like.)

The other corporal treatment is very material, and consists chiefly in getting rid of the melancholic humors and the black bile.

XXIV

OTHER ARABIAN PHYSICIANS

I wish to quote a few Arabian physicians in which the following is worthy of mention from a psychological point of view.

Gabriel Bakhtischwah became very renowned at the court of Caliph Haroun Al Raschid²³, because of curing the Caliph's concubine of paralysis. He cured her through fright and shame. He had the Caliph assemble his entire court and brought the girl into the assembly room. He advanced towards her rapidly and made an attempt as if to raise her skirts. Fright and shame acted so quickly that the girl immediately put down her arms towards her skirts and thus regained the use of her paralyzed arms²⁴.

That the attention of the Caliphs had been attracted to the care of the insane and that it was a subject of conference with their physicians might be gleaned from the following anecdote:

Baktiswah the fourth, lived with Caliph Mottawakeel, whom he served as physician, and was very intimate with him. Once as he sat alongside the Caliph on the ottoman, the Caliph played with the sleeve of the physician's robe until finally there was a tear in it. During this time they were speaking of the insane. "But when do you say it is necessary to lock up and bind the insane?" asked the Caliph. "One of the surest signs," said the physician, "is when a lunatic tears the sleeve of his physician's robe." The Caliph was quite amused at this incident.²⁵

RHAZES (or Mohammed Ebn Secharjah Abu Bekr Arrasi)²⁷ recommended chess²⁸ as a means of curing melancholia. It is doubtful, however, as is said by some,

that Rhazes is the originator of chess and put it to this use. At least Busch²⁹ does not mention him and he seems to give every possible idea on the origin of chess.

EBN SINA³⁰ made himself known at Dschordschan through a cure of the nephew of Caliph Kabus. It was a cure similar to the one given under Erasistratus XI.³¹ He also uses an apparatus in the cure of melancholia which is similar to our swing or see-saw³².

He derives melancholia from a clouded and darkened atmosphere as well as depression out of an ardent love.

The following was obtained from Haller³³. He merely gives the headings:

Avicenna, de morbis mentis tractatus, a Petro Vatterio versus Paris, 1619.

ALI ABBAS³⁴ mentions that young people are prone to a religious melancholia about the time of maturity.

AVENZOAR³⁵ relates an unusual story of a case of melancholia which was brought³⁶ on by drinking stagnant water. He criticises³⁷ the men who treat mental disturbances with cautery. It is here that we get the first trace of the use of cautery for treatment of mental diseases by the ancient authors³⁸.

XXV

In closing I must give a little supplement gathered from a retrospect of ancient times. The points I make are merely touched upon, but should be given because of their value in a complete history.

That many diseases can be cured simply by directing the course of the accompanying passions.

Galen³⁹ cites Aesculapius as an example. He recommended the reading of a poem, or a sonnet, or the seeing of a comic play to those who had overheated their bodies with passion.

NIKANDER of Colophon during the time of the last Persian King Attalus saw insanity caused by the bite of a (Coluber atrox.)⁴⁰

RUFUS OF EPHEBUS, who lived under the Emperor Trajan, wrote a work on melancholia which was lost,

and which was highly praised by Galen. He explains the cause of fear in melancholia as the inner darkness produced by black bile.

ARCHIGENES of Apamea, who practiced medicine in Rome about the time of Trajan, cured one of his teachers of febrile psychosis through oil baths.⁴¹

POSIDONIUS, of Emperor Valen's time,⁴² explains nightmare as coming from natural causes, and says it is often a warning of an approaching mental disease.⁴³

B. PHILOSOPHERS

It would be going beyond and entirely out of the scope of this book, to give the ideas of all the old philosophers on the human mind. I will therefore only quote those who point out anything in regard to the diseased mind.

XXVI

PYTHAGORAS⁴⁴ understood well the psychic action of the art of music. He recommended it in lingering diseases that arose from passions.⁴⁵

Pythagoras established himself as the first teacher of the inner man (as Lykurgas was of the external man.) His teachings were a harmonious combination of mind and body dietetics.*

The pythagorean league furnishes us with the first systematically arranged mind dietetic for the maintenance of the mind's health. The members of this league made it their special duty to maintain the powers of the mind and the body in continual harmony, and very closely avoided any defects in the diet of the mind. Even the apparently harmless emotions, joy and its expression, had to be avoided, so that the harmony of mind and body might be maintained. Even their strict regulations in the choice of food aimed at this; they did not eat bean because beans produced flatulence, and thus burdened the mind.⁴⁶

XXVII

SOCRATES,⁴⁷ the first distinguished Greek⁴⁸ teacher, in his individuality held the soul and the body as two distinct parts, and indeed as the parts capable of strength-

* This is a favorite phrase of the so-called Christian Scientists of the XX Century. It has occurred in the patter of all quasi-medical cults since the days of Pythagoras. With some it remains avoidance of beans, with others of red meats, with others of some other article of diet, or similar rigamarole.

ening man.⁴⁹ According to him the body is to be developed because of its influence on the soul; because on the faulty reason (*dianoia*) where the influence is most important, a weak body tends to cause forgetfulness, moroseness and confusional insanity (*Wahnsinn*).⁵⁰ The soul must be exercised, otherwise the discreet may become indiscreet.⁵¹ Moreover, he calls the mind the mistress⁵² of the body.

He places the intellect in the soul, for, says he, in the soul alone is the wisdom.⁵³ Of the insane he mentions that it would be best if according to law we could lock up the insane and their family, even the father of a insane son.⁵⁴

He contrasts *sophia* with *manis*,⁵⁵ still he holds that he who does not know himself, but who believes he knows, as next to mania. We do not call those people lunatics who do not know the things that are not commonly understood by most people, but only designate those as mad, who are deficient in that which is in general understood by the great mass of people. Further Socrates says we call him insane who thinks he is so tall that he must stoop to pass through the gate of the wall; or who thinks he has the strength to carry a house, or to do things which are known to be impossible by others. On the other hand, those were not considered as lunatics by the multitude, who lacked in small things; but rather were those designated by the word *mania* whose madness was greater. Plithius, a fool, was one who continually overflowed with jealousy; and further the rhapsodists who accurately repeat Homer's⁵⁶ poems are nothing but memory machines. Those who continually concerned themselves about the origin of the world he called insane⁵⁷ because it was impossible for man to solve the problem. Those who believed in the solution, or assisted in the same, were held to be irrational.⁵⁸

XXVIII

PLATO⁵⁹ on the whole devoted himself especially to philosophy, but as Tennemann⁶⁰ has rightly said, that

in no part of the same did he make himself as merited as in psychology. Of the old philosophers he was the first to unfold the source of the diseases of the soul; and who sought to connect the pathology with natural philosophy.⁶¹ His basic views are as follows:

Everything that exists has its active motive in God. But He did not obtain this material for creation out of His own existence; it, however, lay distributed, shapeless and motionless, in a chaotic state since eternity. This material had in it a principle of motion which acted irregularly and irrationally. It seemed to be independent of the Divinity. We designated it the soul. Since there is a duality of the symbolism of matter; for matter proves itself equal to a dualism, therefore the lowly material soul must be a participant of the same. Namely the world is only created of two elementary substances, dust, which gives solidity and perceptibility, and fire which gives vision. To better unite these, two mediating materials were utilized, air to assist the fire and water for the dust. This shapeless and irregular soul that controlled matter before creation, had also to obey the laws of order. The eternal Creator sent the children of his spirit, the ideas of his intelligence, the inseparable and everlasting emanations of his majesty into the world to bring about order, beauty and harmony. There are, therefore, at all times two souls, one material and shapeless, the other a godly, inseparable and eternal soul, called the Son of the Divinity. The evils in the moral and natural world are therefore not accidental, for they are preceded by the primitive nature of matter. The seat of the godly soul is in the head, whose spherical shape is an imitation of the spherical shape of the universe and the heavenly sphere. Since the mortal and real part of man possesses a soul, the godly intelligence must not be troubled with it and a separation of the coarser soul must follow. Since the latter is separable, its better part, anger and courage were placed in the breast, being separated from the head by the neck. The inordinate

desires were placed in a more remote part, in the diaphragmatic region.

From the foregoing fundamentals Plato developed his pathology, which he expressed as follows:

The diseases of the soul, in as far as they arise from the body, engender themselves in the following manner. To begin with one must admit that the want of judgment (Unverstand, anoia,) is a disease of the soul. There are, however, two types of the same: madness (mania) and stupidity (amadia.)

Diseases (disposition) of mind arise mainly from excessive joy or sorrow; for these violent emotions hinder the use of the intellect and exercise of reason. If there is an excessive flow of semen (this comes chiefly from the spinal cord and the brain; this, however, is the organ of the sentient soul and consists of smooth and fixed trigones in which the four elements are mixed) engendered from the spinal cord, and which grows onward luxuriantly like a tree, such a person must be driven by most impetuous desires, and violent pains, and often he raves. One cannot call such a person bad, because he is sick. In fact excess in sexual enjoyment is very commonly the cause of diseases of the mind, because the lack of marrow in the bones, and an excessive flow of the flesh in the fluids disturb the harmony of the body and the soul. In general one can say that the cause of these excessive desires in man are unjustly attributed to him as voluntary faults. No one is premeditatively bad; but rather through the poor condition of the body and ill breeding does man become wicked. These circumstances are all derogatory and engender the bad. Further, if the soul suffers from care, it has a derogatory effect upon the body. For when acid and salty mucous and bitter biliary humors wander about in the body, and cannot be cast off but mix their vapors with the movements of the animal spirits, they produce various diseases of the soul. They act mainly on the three chief organs (head, thorax and abdomen) and bring about many kinds of despondency, dissatisfaction with self, temerity,

cowardice, forgetfulness, and ignorance. In addition poor government and open or secret conversation (about such affairs) have great influence on the strengthening of this evil. There is no knowledge obtained in youth that could be looked upon as a remedy for this evil. In this way all the vices are the result of two kinds of entirely involuntary motives, which must be sought more in the actifier than in the person acting, and more often in the breeder than in the one being bred. We should strive therefore to assist the vice as much as possible by means of good breeding, exertions and education, and thus stimulate the virtues. If one wishes to avoid this evil, one must seek to establish the equilibrium and the harmony of soul and body. For the strenuous exertions of the soul weaken the body, even as too prolonged bodily labors prove disadvantageous to the soul. When a large and somewhat passionless body is combined with weakened reason, the inordinate desires and passions of the body must necessarily gain the upper hand; the godly part of the soul on the other hand becomes deaf to all teachings and loses its memory. Thus arises the great evil of stupidity. Therein lies the cure of both body and soul, since neither one is disturbed without the other and since they at all times assist each other and through maintenance of this equilibrium continue in a healthy condition. One who devotes himself to mathematics or any other study that requires strong mental exertions must seek to keep up the bodily strength by exercising and gymnastics. In the same way he who seeks to develop his body must give the soul the necessary exercise through music and the various forms of philosophy, if he expects to be known as a handsome as well as good man.

Still further Plato expresses himself as follows. Raving he designates *mania* and stupidity as *amadia*.

In Phaedrus⁶², *nosein*, which only means diseased, is used for diseased in mind and is once used as the opposite of *sophronein* (to be of good sense.) In the same

place⁶³ he uses *checkinemenos* for diseased mind, that is, one who has fallen in a violent passion, or rather ecstasy.

In similar manner he uses in the same place⁶⁴ the word *paraxinon*, (maddening): it denotes the etymological indication as follows, it gives to his ideas a distorted⁶⁵ illumination and thus they are directed in an uneven and warped manner; this it is known to do in the arrangement of thought in a mentally diseased patient. In the eleventh book of laws⁶⁶ in which Plato recommends to children indulgence towards their parents, who have grown mentally weak, he uses the word *paranoia*.

XXIX

The views of Cicero on the diseased life of the soul are given in the following passages:

Alienation of the mind indicates that the soul is sick, is suffering. It means being deprived of the use of one's senses, or being in a state of insanity, and one is in such a diseased state whenever he is not in full control of his reason and is taken by some kind of attack or other, be the kind of passion what it will. Whoever suffers thus mentally is alienated. The souls of all idiots (Thoren) are in this diseased state, therefore, their mind is in a state of alienation.

Health of the soul was looked upon by the ancients as a continuous peace of mind. Whenever the soul lacked these distinctions, they were looked upon as alienations; because health could as little exist in a soul disturbed by passions as it could in the body whose functions are disturbed. It is true too that there was a character, in which there was a lack of intellect called "amentia" and "dementia." It is to be seen from this, that those who designated these states by those terms, thought the same as Socrates and the Stoics. "All fools lack health." For the soul that is in a state of suffering (and every disturbance of peace of mind is called a passion) is as little in a condition of health as a body that is in a state of disease.

Therefore, wisdom is health of the soul and foolishness is a disease of the same. Quite adequate is the common expression 'not having one's self in control,' (to have gone out of power.) For this reason we speak of persons having lost power over themselves, because they are no longer under the control of reason which controls all other powers of the soul. It is not easy to discern why the Greeks gave to this state the name *paranoia* for we define the condition more accurately than they. We also differentiate that alienation of the mind (*insania*) which is connected with dementia and which is further separated from mania (*Wuth*). The Greeks very likely wished to make this distinction, but their word (*mania*) is not expressive of the condition. What we call mania (*furor*) they designate *melancholia*. As if the mind (*Geist*) was alone disturbed by black bile and not as frequently disturbed by fear, anger and pain, to which class belong the following maniacs (*Wuthende*) Athamas, Alcamaon, Ajax and Orestes. According to the twelve tablets, one in such state is no longer master of his estate. Therefore the law does not say, "If he begins to be insane" but "mad." For where there is a lack of equanimity or health of mind that is in case of insanity, they supposed one was capable of carrying out in detail the duties which befell one, or which life generally required; but they held that mania (*Wuth*) was an extensive blindness of the mind; this, it appears, is a greater alienation of the mind than the first named or insanity; and still it is to be taken that a wise man can never suffer from insanity but may be attacked by mania.⁶⁷

TO BE CONTINUED.

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1. He lived in the middle of the sixth century, and was born in Amida, Mesopotamia. Cagnati (Var. obs. Lib. IV. C. 17.) incorrectly gives Abydus near Constantinople as his birthplace; and Tiraquel is misled in a passage of Paul of Aegina (Lib. IV. Cap. I.) for he calls him a Cappadocian. Instead of Aetius, it must be Aretaeus, in Paul's work, because the same expressions given by Paul appear under Aretaeus. Compare Weigel, *Aetianar exercitat specim.* Lips. 1791, p. 4-6. Sprengel *Hist. of Medicine*, Vol. II. p. 199. Not. 32.

2. Tetrab. II. Sermon. II. Cap. 2. p. 268. I have the publication and translation of James Cornarius, Basil, 1542, before me.
3. Tetr. II. Sermon. II. Cap. 8. (page 273.)
4. Page 275.
5. Tetr. II. Sermon. II. Cap. 9-10, (page 276-280.)
6. Cap. 2, page 280.
7. Tetr. II. Sermon. II. Cap. 22, (page 285.)
8. Lib. I. Cap. 17. Page 99. The publication of Winth. by Andernach. Basil, 1556.
9. Page 100-103. 10. Page 103. 11. Page 107. 12. Page 108.
13. Page 110.
14. Page 111.
15. Page 113-117.
16. Lib. I. Cap. 13, p. 45.
17. Lib. II. Cap. II. (page 91, edit. per John Gulnth of Andernach, Cologne, 1534; fol.)
18. Lib. III, Cap. 14, p. 95.
19. Cap. 16, page 97.
20. Cap. 17, page 97, 98.
21. He was born in Carthage. In his eagerness for knowledge he visited the Arabian schools, and traveled 39 years in the Orient. On returning to his own country he was taken for a sorcerer and was in danger of losing his life. He fled to Salerno, became private secretary to the Duke of Apuli Robert Guiscard; he soon tired of court life and went into a monastery, Monte Cassino, where he passed the best years of his life translating Arabian authors. He died in 1087.
22. De Melancholia, libri II. (They do not exist separately, but are included in his other works.)
23. About 786 A. D.
24. Abulfarag, chronicle, syr. p. 140.
25. In the year 847 A. D.
26. Abulfarag a. a. O. S. 164, Abulfarag, hist. dynast. ed. Arab Pocock, p. 262. Sprengel, hist. med. II., p. 266.
27. He was born in Ray, a city in Irak. He was head of the hospital in Bagdad, and later at Ray, he died in 923.
28. Rhazes contin. L. I. Cap. 3.
29. In the sixth part of his handbook of inventions, Isenash. 1795, p. 55.
30. Called Also Avicenna, or Al Hussain Abu Ali Ben Abdallah Ebn Sina; born 978, died 1036.
31. The story is given in detail by Herbelot, bibliotheque orientale, Maestricht, 1776, p. 794. Avicenna, while taking the pulse of the patient had all the names of the persons in the palace announced, and noted that on mention of a woman's name the pulse was greatly accelerated, so he concluded that it was a case of secret love.
32. Ebn Sina. Canon. Lib. 3 fen. I. tr. 4 c. 17 (Compare what is said in Sec. CXI of the see-saw.)
33. Bib. Med. I. 387.
34. Also Haly-Abbas, Ali Ben Al Abbas: He was physician in ordinary to the Ameer of Bagdad, Adadoddaula in the year 980.
35. Also Abdel-Malek Abu Merwan: Born in Sevilla and died in 1179.
36. Avenzoar, thesaur. Lib. I. tr. IX., Cap. 9.
37. Ibid tr. IX. C. 17.
38. Oegg has grouped a number of historical facts on the introduction of cautery into treatment of psychic diseases in Hufelands Journal, Sept. 1828, p. 3 and the following.
39. De sanitae tuenda, Lib. I., Cap. 8.
40. Nicander, Theriaca, vers: 429.
41. Aetius, Tetrab. I. Sermon. III., Cap. 172.
42. His time cannot be determined exactly, Barachusen (de med. orig. et. progress. Dissert XV, p. 243) places him after Archigenes.

43. Aetius Tetr. II. Serm. II., Cap. 12.
44. 580 B. C.
45. "Pythagoras used to sooth perturbations by means of the lyre." Seneca on Wrath, Book III, Chapter 9.
46. Theophrast, de caus. plantar. Lib. IV. C. 14.
47. Born 469 B. C., died 400 B. C.
48. As Carus names him (Hist. of Psychology, p. 236.) For his demon was his most treasured teacher who of old only established silence in the self and human knowledge.
49. Zen. mem. 2. 1.19.
50. Ibid. 3.12.6.
51. Ibid. 1.2.19.
52. Ibid. i, 4.9. 17. and 1. 2.53.
53. Ibid. 1. 2. 53.
54. Ibid. 2. 4. 9.
55. Ibid. 3, 9, 4-7.
56. Ibid. 3. 9. 8.
57. Ibid. 1, i. II.
58. Carus Hist. Psychology p. 257, 258.
59. Born 429 B. C., died 348 B. C.
60. Hist. of Philosophy, Part II, p. 430.
61. Compare Sprengel on Plato's tesching of the derangement of the min , Nasse's Zeitschrift f. Psychische Aerzte., Vol. II., 1818, p. 159.
62. Ed't Stephen, p. 231.
63. Ibid. p. 245.
64. Ibid, p. 249.
65. Plato's teachings in the department of nature researches and medical science, Leipzig, 1826, p. 166. Edit. Stephen, p. 928.
66. Mercurialis (variar lect. Lib. VI. Cap. 16. Reproaches Cicero by saying that he did not grasp the meaning of the words mania and melancholia as they were used by the Greeks.
67. Cicer. quaest. Tuscul. III., 4, 5.

HEAVENLY BRIDEGROOMS*

BY THEODORE SCHROEDER

AND IDA C.

The Sons of God saw the daughters of men that they were fair; and they took them wives of all that they chose.

Genesis 6:2.

IN one place Justin Martyr speaks of "evil demons" who "in times of old, assuming various forms, went in unto the daughters of men." Elsewhere he also speaks of these demons manifested as apparitions and mis-led boys as well as women. He said that they "showed such fearful sights to men, that those who did not use their reason in judging of the action done were struck with terror * * * * and not knowing that these were demons they called them girls." Justin evidently looks upon the angelic bridegroom as demoniacal from the start. Clement of Alexandria says that the angels "renounced the beauty of God for a beauty which fades and so fell from heaven to earth."

Athenagoras asserts that the angels "fell into impure love of virgins." But Tertullian calls attention to the fact that sacred Scripture terms these angels *husbands*; and he argues at length very ably to show that we are bound to infer from Scripture that the earthly wives of these angelic husbands were virgins, pure and undefiled, at the time of their marriage. From which it is evident that these marriages were acceptable to virtuous women, and therefore, we may infer, not an infringement of the civil law of the time or the sex which is proverbially conservative would never have contributed so largely to these unions from among its best members. Nor could they have been unions which

* Continued from November, 1915.

transgressed the laws of nature, or the resulting offspring would not have been so well developed physically (as giants) nor mentally (as "mighty men which were of old, men of renown.")

Clement of Alexandria, in his *Miscellanies* (*Stromaba*), appears to blame the sinning angels in addition because they "told to the women the secrets which had come to their knowledge; while the rest of the angels concealed them, or, rather, kept them against the coming of the Lord." These "secrets," we learn from several of the Christian Fathers, were the arts of metallurgy, dyeing, the properties of herbs, astronomy and astrology, etc. Reasoning from this assumption that certain sciences and industrial arts were imparted to mankind from sinful angels, we need not wonder that Tertullian pertinently asks:

"But, if the self-same angels who disclosed both the material substance of this kind and their charms—of gold, I mean, and lustrous stones—and taught men how to work them, and by and by instructed them, among their other [instructions] in [the virtue of] eye-lid powder and the dyeing of fleeces, have been condemned by God, as Enoch tells us, how shall we please God while we joy in the things of those [angels] who, on these accounts, have provoked the anger and vengeance of God?"

Tertul. on Female Dress. II. 10.

This thought seems to have been to him a matter of serious moment, for he enlarges upon it, as follows when speaking of the dress and ornamentation of women:

"For they, withal, who instituted them and assigned, under condemnation, to the penalty of death—those angels to wit, who rushed from heaven on the daughters of men; so that this ignominy also attached to women. For when to an age much more ignorant [than ours] they had disclosed certain well-concealed material substances, and several not well-revealed scientific arts—if it is true that they had laid bare the operations of metallurgy, and had divulged the natural properties of herbs, and had promulgated the powers of enchantment, and had traced out every curious art, even to the interpretation of the stars—they conferred properly

and as it were peculiarly upon women that instrumental mean of womanly ostentation, the radiances of jewels wherewith necklaces are variegated, and the circlets of gold wherewith the arms were compressed, and the medicaments of archil with which wools are colored, and that black powder itself wherewith the eyelids and eyelashes are made prominent. What is the quality of these things may be declared meantime, even at this point, from the quality and condition of their teachers; in that sinners could never have either shown or supplied anything conducive to integrity, unlawful lovers anything conducive to chastity, renegade spirits anything to the fear of God. If [these things] are to be called teachings, ill masters must of necessity have taught ill; if as wages of lust, there is nothing base of which the wages are honorable. But why was it of so much importance to show these things as well as to confer them? Was it that women without material causes of splendor, and without ingenious contrivances of grace, could not please men, who, while still unadorned and uncouth, and—so to say—crude and rude, had moved [the mind of] angels? Or was it that the (angelic) lovers would appear sordid and—through gratuitous use—contumelious, if they had conferred no [compensating] gift on the women who had been enticed into connubial connection with them? But these questions admit of no calculation. Women who possessed angels [as husbands] could desire nothing more; they had, forsooth, made a grand match. Assuredly they who of course, did sometimes think whence they had fallen, and, after the heated impulses of their lusts, looked up toward heaven, thus requitted that very excellence of women, natural beauty, as [having proved] a cause of evil, in order that their good fortune might profit them nothing but that, being turned from simplicity and sincerity they together with [the angels] themselves, might become offensive to God. Sure they were that all ostentation and ambition, and love of pleasing by carnal means, was displeasing to God.”

Tertullian on Female Dress, Chap. II.

Cyprian, when blaming virgins for wearing jewels, necklaces and wool stuffs colored with costly dyes (On the Dress of Virgins, 14.) likewise remarks:

" All which things sinning and apostate angels put forth by their arts, when, lowered to the contagions of earth, they forsook their heavenly vigor."

When we remember that early Christianity sets its face like a flint against all delights of the senses and that this extreme reaction of the spiritual against the sensuous has largely shaped our social customs of today, we begin to see how important and far-reaching were these opinions of the Church Fathers that feminine adornment had been taught by angels who had sinned in wedding earthly women, and that it was therefore a sinful thing in that it has emanated from a depraved source. Some of the theories built upon this assumption are quite curious. Here are a few:

"That which He Himself has not produced is not pleasing to God, unless He was *unable* to order sheep to be born with purple and sky-blue fleeccs: If He was able, then plainly He was *unwilling*, what God willed not, of course, ought not to be fashioned."

Tertullian on Female Dress, I. 8.

"For it was God, no doubt, who showed the way to dye wools with the juices of herbs and the humous of conchs: It had escaped Him, when He was bidding the universe come into being, to issue a command for (the production of) purple and scarlet sheep."

Tertul. on Female Dress, II. 10.

Why should she walk out adorned? Why with dressed hair, as if she either had or sought for a husband? Rather let her dread to please if she is a virgin * * * * * It is not right that a virgin should have her hair braided for the appearance of her beauty.

Cyprian on the Dress of Virgins, 5.

"You are bound to please your husbands only. But you will please them in proportion as you take no care to please others. Be ye without carefulness, blessed [sisters]; no wife is "ugly to her own husband." She "pleased" him enough when she was selected [by him as his wife]; whether

commended by form or by character. Let none of you think that if she abstain from the care of her person [compositione sui]; she will incur the hatred and aversion of husbands. Every husband is the exactor of chastity; but beauty a believing [husband] does not require, because we are not captivated by the same graces which the Gentiles think to be graces."

Tertul, on Female Dress, Book II, Chap. IV.

"Do ye O matrons flee from the adorning of vanity such attire is fitting for women who haunt the brothels. * * * * * To a wife approved of her husband, let it suffice that she is so not by her dress, but by her good disposition. The instructions of Commodianus in favor of Christian Discipline against the Gods of the Heathens, 59."

Let us remember that these and similar teachings by the early Christian Fathers have laid the foundation of our present marriage customs. The theory that a woman sins in adorning herself to please a husband (whether present or prospective), and this theory is still indescribably popular among devout Christians.

Commodianus ascribes the teaching of "arts, * * * * * and the dyeing of wool, and everything which is done," not to the angels but to the giant progeny. And he adds:

"To them, when they died, man erected images. But the Almighty, because they were of an evil seed, did not approve that, when dead, they should be brought back from death. Whence wandering they now subvert many bodies, and it is such as these especially that ye this day worship and pray to as gods."

The Instructions of Commodianus in favor of Christian Discipline, against the Gods of the Heathen.

The author of the Clementine Homilies records a tradition concerning these gigantic "wanderers" on the borders of Ghostland which seems to him that they were not unable to beget children: After speaking of the Deluge he says:

"Since, therefore, the souls of the deceased giants were greater than human souls, inasmuch as they also excelled their bodies, they, as being a new race, were called also by a new name. And to those who survived in the world

a law was prescribed to God through an angel, how they should live. For being bastards in race, of the fire of angels and the blood of woman, and therefore liable to desire a certain race of their own, they were anticipated by a certain righteous law."

Clementine Homilies, VIII, 18.

Inasmuch as the Deluge had already destroyed every one on the earth except Noah and his family, we see that the author cannot mean by those who survived in the world any giants still in the flesh. Moreover, the decree which followed and which prescribed that they are to have power over only those human beings who break the moral law and practice magic would indicate these "giants" had then entered upon what Theosophists would call astral, and from the paragraph quoted above, it is evidently taken for granted that these astral giants would propagate their kind. This is an important point—the testimony of a Christian Father of a tradition that human beings (not created angels) who had once inhabited bodies, could beget children on the plane of the astral unless prevented by the direct prohibition of Heaven. If it be objected that the author refers to giants still in earthly form when he speaks to "those who survived in the world" I am sure that the statement follows a remark about the Deluge and that in that case the surviving giants must have been Noah and his family. This view, however, is absurd, when we consider that the decree forbade the giants to assume power over any but the human race. If Noah and his family were the surviving giants, where would be the sense in promulgating such a decree to them? This same author gives an account of the doings of the angelic fathers of these giants which reminds one strongly of the spirit seances of the late Rev. Stainton Moses, when under conditions which precluded all fraud or illusion, tiny pearls and other precious stones suddenly materialized before the sitters. Here is the tradition recorded by the Christian Fathers:

"For of the spirits who inhabit the heaven, the angels who dwell in the lowest region, being grieved at the ingratitude of man to God, asked that they might come

into the life of man, that, really becoming man, by more intercourse they might convict those who had acted ungratefully towards Him, and might subject every one to adequate punishment. Then, therefore, their petition was granted, they metamorphosed themselves into every nature; for, being of a more god-like substance, they are able easily to assume any form. So they became precious stones, and goodly pearl, and the most beauteous purple, and choice gold, and all matter that is held in most esteem. And they fell into the hands of some, and into the bosoms of others, and suffered themselves to be stolen by them. They also changed themselves into beasts and reptiles and fishes and birds, and into whatsoever they pleased. These things, also the poets among yourselves, by reason of fearlessness, sing, as they befell, attributing to one the many and diverse doings of all."

Clementine Homilies, VIII, 12.

(Then, "having assumed these forms, they convicted as covetous those who stole them, and changed themselves into the nature of man, in order that, living holily, and showing the possibility of so living they might subject the ungrateful to punishment." However, "having become in all respects men, they also became subject to masculine infirmities and fell.")

Does it not seem as though we had here a survival of Animism—a state of mind frequent among savages, children and animals in which an inanimate object which moves without visible cause or manifests in any peculiar way is thought to be alive. A horse is often terrified by a piece of paper blown in front of him, evidently he takes it for a live creature. Savages speak of the sun and moon as living individuals because of their apparently voluntary journeys through the sky; [among] the Kukis of Southern Asia * * * * * if a man was killed by a fall from a tree, his relatives would take their revenge by cutting the tree down, scattering it in chips. A modern King of Cochin, China, when one of his ships sailed badly, used to put it in the pillory as he would any other criminal. (Bastian, *Oestl., Asein*, Vol. 1, p. 51.) In classical times, the stories

of Xerxes flogging the Hellespont and Cyrus draining the Gyndes occur as cases in point, but one of the regular Athenian legal proceedings is a yet more striking relic. A court of justice was held at the Prytaneum, to try any inanimate object, such as an axle, a piece of wood or stone, which had caused the death of anyone without proved human agency, and this wood or stone, if condemned, was with solemn form cast beyond the border. The spirit of this remarkable procedure reappears in the old English law (repealed in the present reign), whereby, not only a beast that kills a man, but a cart-wheel that runs over him, as a tree that falls on him, kills him, is dead and is given to God, * * * * forfeited and sold for the poor * * * *. The pathetic custom of "telling the bees" when the master or mistress of a house dies, is not unknown in our own country. In Berlin, Germany, the idea is more fully worked out; and not only is the sad message given to every bee-hive in the garden and every beast in the stall, but every sack of corn must be touched and everything in the house shaken, that they may know the master is gone. And we all know that even an intelligent nineteenth century man is not above administering an angry kick to a chair against which he has bruised himself.

Now the author of the Clementine Homilies seems to have similarly lighted on an instance of Animism in connection with gold, pears, precious stones, etc. In prehistoric times this tradition, rational and intelligible, may suppose that these precious articles had moved or otherwise behaved as though endowed with life in the ancient times to which the tradition relates. Could it be that they suddenly appeared to those prehistoric gazers, coming from no one knew where, and moved about by unseen hands, as tables are lifted, bells rung, banjos played or flowers materialized at a modern spiritual scance, evidently reported to have come by occult means, supposed to be heavenly. The people who witnessed the phenomena were probably not accustomed to clear headed and intelligent investigation of such phenomena, see at once it was an Animistic explanation such as is given in the Clementine Homilies. As to the

frightened horse, and to the ignorant savage, inanimate things seem to be alive, so may the precious objects which materialized at those prehistoric seances have seemed to the beholders to be living creatures, in as much as they sped through the air without visible support. If alive, they surely (so would argue the witnesses) must be angelic beings since they were said to come from heaven and the attendant phenomena of the seance no doubt would increase the awe with which these "angels" were received and treasured. An "angel" is simply a vehicle for a message in the original signification. Let us glance in passing at the accounts of materializing through the psychic power. In this sense a pearl materialized through the psychic power of so reliable a modern medium as the Rev. Stainton Moses, plainly by occult means might be called an "angel"—i. e., the means by which the message from the unseen reached the sitters. In after times when the word angel had come to be specialized as a personal envoy from Heaven, the old tradition about the pearls and precious stones which had evidently come as "angels" (vehicles for a heaven-sent message) whenever told would probably be adopted to the specialized meaning and it would be said as above, that personal beings transformed into these inanimate things. First, as to the manifestations through the Rev. Stainton Moses lately declared in his journal occurs the following entry:
Tuesday, September 9th, 1873.

"Same conditions. Plentiful scent as before. Sixteen little pearls were put on the table, six having been previously given during the day. Mrs. Speer and I were writing at the same table, and a pearl was put on my letter as I was writing. After that I saw a spirit standing by Mrs. Speer, and was told that it was Mentor, who had put a pearl on Mrs. Speer's desk. After that four others came. They seemed to drop on the table, just as I have seen them with Mrs. A——h. We have in all twenty-one now. They are small seed pearls, each perforated."

A week later, there is this entry:

"When we broke up we found a little heap of pearls was put before each. One hundred and thirty-nine little

pearls have been brought to us, one hundred and ten in the last two days."

(This, it appears from another witness, occurred in daylight.)

Dr. Speer (referred to by Miss X. in Borderland as "a highly intelligent and by no means credulous witness") gives a striking instance of the materialization of a precious object:

December 31st, 1872.

"A very successful seance. A blue enamel cross was brought, no one knew whence, placed before my wife, who was told to wear it."

Mrs. Speer testifies as follows:

Ventnor, November 29th, 1893.

"I wish to state that the most convincing evidences of spirit-power always took place when hands were held.

"Other manifestations occurred, often in light, such as raps, raising of table, scent, musical sounds, and showers of pearls * * * * *. Two cameos were carved in light while we were dining."

Before leaving this part of the subject, it may be well to quote the following by Miss X. in Borderland (Miss X., I would add is by no means a spiritualist, but is distinctly opposed to the Spiritistic hypothesis):

"Mr. Stainton Moses has for many years been one of the most important witnesses for Spiritualism. The fact that, like Professor Crookes and Alfred Russell Wallace, he was a gentleman, a scholar, and a man of recognized position and character, was, to say the least, a good letter of introduction * * * * *. It may be said, once for all that it is unnecessary to insist on the absolute sincerity of Mr. Stainton Moses. It is a point which has never been so much as raised. His life has been of a kind not to be called in question—obscure without mystery, dignified without pedantry, lived in the sight of just that class of the public which demands the strictest respectability of conduct, the most unequivocal correspondence between life and profession. As a clergyman he was beloved by his parishioners, as a schoolmaster he was respected by his boys, as a personal

friend he commanded the confidence and esteem of all his intimates."

May it not be that the phenomena recorded by the author of the Clementine Homilies are essentially the same in kind as those referred to above in the case of the Rev. Stainton Moses?

St. Augustine, considering the possibility of occult sex relations between earthly women and beings from the unseen world, remarks:

"The Scriptures plainly aver that the angels have appeared both in visible and palpable figures. And seeing it is so general a report, and so many aver it either from their own experience or from others, that are of indubitable honesty and credit, that the sylvens and fauns, commonly called incubi, have often injured women, and that certain devils from the Gauls call "Duses," do continually practice this * * * *, and tempt others to it, which is affirmed by such persons, and with such confidence, that it were impudence to deny it. I dare not venture to determine anything here; whether the devils being embodied in air (for the air being violently moved is to be felt) can suffer this lust, or move it so as the women with whom they commix, may feel it; yet do I firmly believe that God's angels could never fall so at that time."

St. Augustine's City of God, XV., 23.

Notice the perplexity of St. Augustine as a logician. He cannot deny that occult sex relations exist on the Borderland, the testimony to this is too wide spread and of too reliable a character. But, (we can imagine him saying) how reconcile these phenomena with the belief that the inhabitants of the world beyond the grave are immaterial, vapory, mist-like beings?

How can such a hazy, ethereal creature as a ghost produce objective sensations of touch upon an earthly being? And if possible—as he ingeniously supposes, by such means as air becomes perceptible to us when violently put in motion—how reconcile such phenomena with the belief that sex is impure, and that it does not exist in the world beyond the

grave? How could God's angels ever fall so? It were impossible.

But St. Augustine evidently starts from two hypotheses—the unsubstantiability of ghosts and the impurity (foot-note, as will be seen by a perusal of the quotation in full,) and, therefore, non-existence of sex, neither of which two hypotheses has ever been definitely proven. As a logician therefore, he is at fault, and I have already shown the danger of starting from mistaken premises when dealing with occult phenomena. The two hypotheses, however, were not peculiar to St. Augustine. They were, and are, the common property of the majority of mankind. But it does not follow that they are correct: and the psychic who rashly assumes their truth to start with (through prejudice or because other people think so) may expect to be deluded, and to come upon all sorts of fantastic, and possibly, diabolical manifestations. Such is the occult law. Start with a false premise or with a premise which you have not investigated with scrupulous care, and you are certain to get phenomena of either a misleading or a depraved character.

But all the Christian Fathers did not accept the possibility of bridegrooms from the unseen world. There were then, as now, Materialist minds which disbelieved in ghosts. Alexander, Bishop of Lycopolis, endeavored to explain away angelic bridegrooms as myths, thus:

“When the Jewish history relates that angels came down to hold intercourse with the daughters of men * * * * this saying signifies that the nutritive powers of the soul descended from heaven to earth.”

On the Tenants of the Manicheans, XXV.

Hence the “injuring” of women by incubi—to which St. Augustine refers, an injuring either wholly subjective and illusory, or, if objectively real, was brought about in part by the woman's ignorance of the occult requirements for correct living and clear-headedness on the Borderland, in part by her failure to thus live and think on the earthly plane.

It would be interesting to know his authority for this. Rationalistic theories cannot rest as do folklore traditions,

upon a mere say-so; they must be supported either by testimony or by argument. Otherwise, we are obliged to dismiss them as the whimsical fancies of a solitary individual.

Origen says he will "persuade those who were capable of understanding the meaning of the prophet, that even before us there was one who referred this narrative to the doctrine regarding souls, which became possessed with a desire for the corporeal life of men" and thus in metaphorical language he said was termed "daughters of men." But Origen does not give his authority, nor advance any argument in support of this explanation.

Julius Africanus suggests another Rationalistic explanation, but is candid enough to give it as his own notion. He says:

"When men multiplied on the earth, the angels of heaven came together with the daughters of men. In some copies I find 'the sons of God.' What is meant by the Spirit, in my opinion, is that the descendants of Seth are called the sons of God on account of the righteous men and patriarchs who have sprung from him, even down to the Saviour Himself; but that the descendants of Cain are named the seed of men, as having nothing divine in them, on account of the wickedness of their race and the inequality of their nature, being a mixed people, and having stirred the indignation of God."

This ingenious theory has been eagerly grasped at by succeeding Christian writers who disbelieve in the substantiality of ghosts. So able a commentator in modern times, however, as Delitzsch (*On Genesis*) decides against this view, and quotes various authorities which I give elsewhere. He also quotes Keil as demonstrating that two of the Hebrew words in the text in Genesis show that "the contraction of actual and lasting marriages" is meant.

Julius Africanus, indeed, seems to have had doubts as to whether the current tradition about angelic bridegrooms might not be true after all, for he adds directly upon the heels of the above theory:

"But if it is thought that these refer to angels, we must take them to be those who deal with magic and jug-

glery, who taught the women the motions of the stars and the knowledge of things celestial, by whose power they conceived the giants as their children, by whom wickedness came to its heights on the earth, until God decreed that the whole race of the living should perish in their impiety by the Deluge."

Extant Fragments of the Five Books of the Chronography of Julius Africanus, in Georgius Syncellus, Chron. p. 19, al 15, ed. Paris, 14 Venet.

Nevertheless, Rationalists and Materialists are in the minority among the Fathers of the Church as regards this subject. The majority accepted the accounts in Genesis and Enoch at their face value.

To briefly sum up the majority's views of the early church on this matter:

1. Angels of a superior order did come into the earthly life—whether (a) because God sent them, or (b) because they were moved with indignation at the ingratitude of men toward God and came voluntarily in order to reconcile God and man, or (c) because they were enticed by women on the earth, the traditions do not agree.

2. Having come into this earthly life, they became either the lovers or the husbands of women, whether beguiled thereto in part by the Devil, or wholly by the women or, partially or wholly by their own desires, the traditions again do not agree. One tradition, as we have seen, hints at the sin of Sodom; and an interference on the astral plane with the rights of earthly husbands; others hint at illicit amours; but Tertullian demonstrates unanswerably from sacred Scripture that the angels were the wedded husbands of the daughters of men, and that these daughters were virginal at the time of wedding their angelic lovers.

This was not, however, all their sin. One tradition, as we have seen, makes a vague allusion to the sin of Sodom in connection with the intercourse of angels with women.

3. That an angelic woman should seek in honorable marriage, especially an earthly woman, it would appear, was reckoned a sin. When asked why, we find that the

Church Fathers, one and all, treated marriage as a mere expedient. Tertullian said that the reason why 'marrying' is good, is that 'burning' is worse. Minncius Felix (Octavius XXXI) remarks that "with some even the modest intercourse of the sexes causes a blush." Methodius has an entire book devoted to an argument offered by ten virgins against wedlock and in behalf of perpetual virginity. Origen says: "God has allowed us to marry, because all are not fit for the higher, that is, the perfectly pure life. Cyprian says that, "Chastity maintains the first rank in virgins, the second in those who are continent, the third in the case of wedlock." He also says:

"What else is virginity than the glorious preparation for the future life? Virginity is of neither sex. Virginity is the continuance of infancy. Virginity is the triumph over pleasures. Virginity has not children; but what is more, it has contempt for offspring; it has not fruitfulness, but neither has it bereavement; blessed that it is free from the pain of bringing forth, more blessed still that it is free from the calamity of the death of children. What else is virginity than the freedom of liberty? It has no husband or master. Virginity is freed from all affections; it has not given up to marriage, nor to the world, nor to children."

Cyprian, *Of the Discipline of Chastity*, 7.

Justin Martyr exults that "many, both men and women of the age of sixty and seventy years, who have been disciples of Christ from their youth, continue in immaculate virginity."

In a spurious fragment credited to "Hippolytus, the Syrian Expositor of the Forum," the writer refers to an ancient Hebrew MS., which tells of Noah being commanded by God to stake off each male animal in the ark from the corresponding female. The other and principal object of marriage which runs through all nature from protoplasmic cells up to man—of mutual exchange of strength and mutual happiness, seems to have been totally ignored by the early Christian Fathers. Lactantius held that it is impossible the two sexes could have been instructed except for the sake of generation. Justin Martyr says frankly:

"Neither marry at first, for no other object than to rear children, or else abstaining from marriage, continue to live in a state of continence."

Apology I, 37.

He notes with approval a Christian youth who begged Felix, the governor of Alexandria, for permission to be made a eunuch by a physician, in order to attest his continence to the world. (Felix, however, had the good sense to refuse.) To such an extent was this unnatural loathing for wedlock carried, that Constantine found it judicious to remove the old-time penalties against celibacy, because of the many Christians who continued celibates from motives of religion.

Since marriage on natural grounds was thus depreciated by the early Church as impure when occurring between earthly men and women, we need not wonder that she viewed with horror the very thought of wedlock with an angel in as much as angels were supposed to be above earthly weaknesses. Having thus started from a false premise, i. e., that marital passion cannot be pure in God's sight, there was no other deduction to be made regarding these love-matches between angels and women but that they were sinful.

4. But, according to the Christian Fathers, the angels committed other sins, in addition to seeking a woman in honorable marriage. They actually endeavored to beautify the world into which they had come, and to make men wiser and happier by teaching them various arts and sciences. One might have thought this a cause for gratitude; but the Church Fathers, having started from a false premise, were logically bound to deduce the theory which Tertullian did—that as these spirit husbands were fallen angels, what they taught could not possibly be conducive either to integrity, chastity, or the fear of God. Therefore, dress and adornment and the industrial arts of dyeing and metallurgy were sinful, and consequently, displeasing to the Almighty. Very different is the view taken by a more modern writer, Sir Thomas Browne, the author of the *Religio Medici* who, advocating the doctrine of this celestial guardianship over marriage on earth, observes: "I do think that many mysteries ascribed to our own inventions, have been the courteous

revclation of spirits; for these noble essences in heaven bear a friendly regard unto their fellow natures on earth."

Apparitions, pp. 3-4. R cv. Bouchier Wrey Savile, London, 1880.

5. Ambition plays a prominent part in the traditions, it will be noticed. It is said that these angels were ambitious for earthly power and exacted libations and sacrifices; and also that they were the beings whom the heathen ignorantly supposed to be gods.

But if the reader will recall what I have said about the misleadings in spirit manifestations when the psychic starts from a false premise, he will understand how possible it is that we have to deal here with subjective illusions, and not objective realities; and that the lower estimate in which these angelic visitors came to be held was due entirely to the failure of psychics to keep the laws of correct moral living or common sense and his weaknesses and vanities and superstitions will be played upon *ad libitum*. As for the giant offspring said to have resulted from these unions—offspring which in the male line became evil-doers, and finally demons on the astral plane—if the reader will consider that necessity to which I have referred for correct living and clear thinking on both sides of the abyss of death, if the bridge of communication is to hold, he will see that if these "giants" continued to influence the world from the astral plane they could not be evil demons, but must be beneficent helpers of mankind. But there is, I think, grave doubt as to whether such offspring ever resulted from these unions between angels and earthly women, as the reader will see when I come to speak of the occult laws governing such unions. Nevertheless, there is something to be said on both sides, and we should do well to reserve our judgment until all the evidence is before us.

We have seen that Commodianus says that these giants are the gods to whom the heathen ignorantly prayed. Justin Martyr, mindful of certain similarities between the stories told of those same heathen gods and the Scriptural account of Jesus, advances the theory that the demons had some imperfect perception of the coming Messiah, gleaned from

the Old Testament prophecies, and that they tried to forestall Christianity by ascribing Christ's possible attributes in advance to the gods.

TO BE CONTINUED.

IS GENIUS A SPORT, A NEUROSIS, OR A CHILD
POTENTIALITY DEVELOPED?*

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POE'S judgments are, from the standpoint of poetry, to a large degree pretty generally regarded as justified. In some recently published letters to E. C. Stedman,¹³ Swinborne remarks that Stedman's rebuke on the subject of American poetry is doubtless as well deserved as it is kindly and gently expressed. Yet I must say that while I appreciate, I hope, the respective excellence of Mr. Bryant's 'Thanatopsis,' and Mr. Lowell's 'Commemoration Ode,' I cannot say that either of them leaves in my ear the echo of a single note of song. It is excellent and good speech, but if given us as song its first and last duty is to sing. The one is most august meditation and the other is a noble expression of deep

* Continued from Nov. 1915.

and grave patriotic feeling on a supreme national occasion. But the thing more necessary, though it may be less noble than these, is the pulse, the fire, the passion of music, the quality of a singer, not of a solitary philosopher or patriotic orator.

Mr. Longfellow has a pretty little pipe of his own, but surely it is very thin and reedy. Again, whatever may be Mr. Emerson's merits, to talk of his poetry seems to me to be like talking of the scholarship of a child who has not yet learned its letters. Even Browning's verse always goes to a recognizable tune. I say not to a good one. But in the name of all bagpipes, what is the tune of Emerson's? Now it is a poor thing to have nothing but melody and be unable to rise above it into harmony. But one or other, the less if not the greater, you must have. Imagine a man full of great thoughts and emotions resolved to express them in a painting who has absolutely no power upon form or color. Wainwright, the murderer, who never had thought or emotion above those of a pig or butcher, will be a better man for us than he. I re-read a good deal of Emerson's first volume of poems, therein mentioned, which certainly contains noble verses and passages well worth remembering. I hope no personal feeling or consideration will ever prevent or impair my recognition of any man's higher qualities. In Whittier's power, pathos, righteousness (to use a great old word that should not be left to the pulpsters) of noble emotion, would be more enjoyable and admirable if he were not so deplorably ready to put up with the first word, good or bad, that comes to hand and to run on long after he is out of breath. Mr. Lowell's verse, when out of the Bigelow costume, I never could bring myself to care for at all. You know my theory, that nothing which can as well be said in prose ought ever to be said in verse.

Technic was, of course, a means to an end with Poe. Of course as an end from its conventionalizing tendency. John Butler Yeats remarks, however, in art as in life a perfect technique means a dwindled humanity.

The English have it in life. Nowhere else is there an approach to this smoothness of English life, and it fascinates the traveled American. Yet do not let him forget the price at which it was obtained, warns the sage.

In England at the present moment it means death, by slow strangulation, of imagination, of poetry, and of the arts. Here in America, beneath a surface rough as their country roads and their ill-paved streets, are wells of feeling which easily become fountains of desire and well-springs of enthusiasm and ideality. It is this ideality, this inspired hopefulness, that, vibrating in the air, has imparted to the New York faces the New York look of expectation and holiday.

I have heard an Englishman in London talk lovingly of Italy till his voice broke. My friend was a poet enamored of beauty; yet it is my belief, and I do not think it a paradox to say so, that Shelley, living in these days, would have preferred New York to Rome. The 'esthetic,' the 'artistic' person will mock at this, but such people do not know the sincerity, sense of fact, power of belief, and hard energy of desire that mark the real poet and distinguish him from the languid esthete and the self-conscious minor poet. The poet is a serious person, as serious as Oliver Cromwell or as Luther or as John Knox; he is, indeed, of all men the most serious, though he coerce no man's will. Let us not forget that the prophets of Israel were the poets of Israel.

The Englishman and, indeed, the European, is a man of "low vitality." Because in all his pleasures there will be some alloy of pain and ache and dejection. His friendships also will be touched a little with distrust; and any real approbation, whether of himself or others, will be a visible effort; while, his recuperative powers being slight, he does not easily forgive if once offended. He is like some country where, though the season of spring may come, it never ripens into full summer. His humor will not in the least resemble American humor—in fact, it is quite the contrary. American humor is energy extravagantly recoiling from its own extravagance; while

here is a man who smells mortality everywhere and regards the scheme of things with convinced despondency. To be angry would be contrary to his settled habits, besides that it would exhaust his strength. The alternative is a kind of sorrowful mirth which wins us by its hopeless kindness and deep sincerity. His only unamiable trait is a mild self-complacency, inevitable in a man who thinks everybody wrong, and that he alone is aware of it.

I have been thus particular in describing the man of low vitality because, in comparison with the New Yorker and the American, the Englishman is such a man. Indeed, in this comparison the whole European intellect seems to me a little invalidish and of low vitality. Like an invalid, it dislikes change and variety, except such as are very slight, like the going from one room into another; yet as regards these slight changes, its demands and caprices and longings are incessant and feverish; while the American habit of bold innovation and effectual challenge to everything and anything is shocking, like a strong illumination to sick eyes. It is like an invalid also in its preference for pessimistic philosophy of the sort Nietzsche has provided, which resembles nothing so much as the visit of a courtly physician who ministers to the patient's distorted vanity by finding all his symptoms dark and desperate, and yet has words of balm for the patient's self-conceit and exaggerated notion of his own importance. As to this sudden craze for empire-building with which Europe is at present so troubled and perplexed, what is it but a sick man's timid acquiescence in the obstreperous energy of some masterful relation who, full of health, bursts into his sick-room and carries him off he knows not where, and is too timid to ask? It is only a sick Europe which would permit the reaping-hooks of knowledge, art and science to be turned into the bayonets and rifled cannon of empire and war; and the "over-man" into a sergant of dragoons.

These ancient peoples have ceased to feel strongly. Their youthful period of power and passion has departed,

and the blood waits upon the judgment. The departure of youth and the chilling of the blood mean that the senses have become too active, so that art has retreated to its last citadel, which is sensuality with its languors, fatigues, and disgests, its cynicism and its melancholy. In the various kinds of art, there being no inspiration of strong feeling, no "thus saith the Lord," as Spurgeon would have put it, the interest is in technic, and in the application of ingenious theories of technic, questioning everything and weighing it in the critical scales of learned judgment, the famous "art for art's sake" being little better than change for change's sake, like dandies artistically substituting one fashionable affectation for another. Exhibitions in Paris or London (inaccessible to the frankly sensual art) are a weariness, such quantities of technic amounting to nothing, so much diligence, and yet it is not worth doing—the technic remarkable and yet always too big for the artist. On the other hand, to go into the National Gallery of London and see the old masters is to make acquaintance with pictures where the artist is too big for his technic; Turner continually striving to do things which he could not do, which perhaps no painter could do at any time; in a lesser degree it is the same with Hogarth, whose technic would make a Paris art student smile; and as to Michelangelo's 'energy,' what are these convulsive strainings in marble but the defeat of the infinite man striving to express himself in a finite medium? The second-rate artists, like Alma Tadema, Bouguereau, etc., surprise the world with miracles of perfect skill. It is the great artists who shock us by their deficiency, the man always greater than the artist. These men having undergone canonization, we no longer criticize them; yet it is there, nevertheless: the fault of an inadequate technic. A perfect technic means an inferior artist. Great energies are imperfect in their form. They have not the patience or the time to make it otherwise. Flaubert himself has said that it was only because he was second-rate that he bestowed so much labor on "style."

Poe didn't sacrifice beauty to technic but used his technic to express rhythm and hence increase beauty in sound as well as sense. The greater the power of association the more vivid the mental picture. The more vivid the mental picture the greater the need of inhibitions to symbolize clearness and rid it of an injuriously excessive subjective element. This element has pre-conceived notions behind it, derived from training of which sometime before his death, Andrew Lang remarked, certain microbes of letters still harrass Poe's name with their malevolence while old women twitter out those incredible slanders in the literary papers of New York. H. S. Canfield cites this approvingly as illustrative of the attitude of what he calls literary mavericks holding a symposium on why Poe was unpopular in America. This is a New England myopia justified neither by the enormous sale of cheap cloth editions of Poe (15c and 25c) in the department stores nor by the extensive sales of more costly editions. The famous edition (now newly issued) of "Little's Classics" of the Boston firm of Ticknor & Co. still further illustrates this naturally anglo-maniac morbidity. Henry James finds Poe's poems very valueless verse. Philistinism like this finds expression in other New Englanders of lesser literary caliber. Burrows, one of the symposiachs, indulges in the following rather belated cant: "It is a maxim in art which should be familiar to every artist in whatever medium he works that the moral creates enthusiasm and so secures belief." Another mentally fossilized New Englander indulges in the following:

"I saw thee—thee only—years ago,

I must not say how many but not many."

This attempt at playfulness Mrs. Sheldon remarks, taken in connection with the tenor of the rest of the poem, produces an effect that is ludicrous, which is her reason for supposing Poe unpopular in America. This reminds one of the egocentric attitude of the three tailors of Toolery Street who issued a pronunciamiento as "the people of England." Perhaps the most amusing phrase

of the "moral purpose" enthusiasm is the derogation of the "Gold Bug" moral purpose as exemplified by an author, would be found in Henry James whose "Turn of a Screw" has a dead sexual pervert "control" spiritually the heroine of the story. Europe has however, at length, followed New York and the South and the French in its attitude toward Poe. According to Arthur Mached, a disciple of Pater, "Poe is one of the most important figures in the whole history of the fine art of letters and those who have not been initiated into the mystery must be regarded as profane, unfitted to approach the shrine and oracle of the great American. Poe laid down the far reaching law that music represents the point to which literature should aspire. As men in the market place, buying and selling, cheating or being cheated, speaking of common things to common tones, hear now and again, the far off triumph of the organ and clear voices chanting the eternal mysteries, so in the tales and poems of Edgar Allan Poe there is a secret sense below the open sense, the sound of voice that is not man."

According to another English writer, Arthur Ransome, Poe, "throughout his life sought a philosophy of beauty which should also be a philosophy. He did not find it and the unclouded nature of his search is itself sufficient to explain his present vitality."

"Seekers rather than finders stimulate the imagination. The theory of art was his staff of life. He held didacticism as the unforgivable sin and the (coval) writers were concerned with morality for its own sake. He could speculate without fear; his followers were never without a thought of the praise or blame that could be given them by the black rabid misisters of morality. Poe owned a higher censorship. He knew that he was nearer than they, alike to the earth and to the stars. In all his work there is a breath of impatience with those who are never to understand it. He felt himself surrounded by fools and deaf men to whom he had to shout to be heard and exasperate to be even partially understood. Poe, who could have been a great man of business, a

great mathematician, a great thinker, a great artist, was none of these things, failing in life, but seeking down every turning for that scrap of knowledge concerning beauty and the aesthetic life of man which might there be possibly concealed." Baudelaire, dealing with the alcoholophobic cant of New England which seized upon defect as a punishment for the content for Boston phillistine omniscience which Poe openly avowed, says that there was probably geniuses who drank (it was a little before the Neal Dow epidemic) but excused themselves for their stupidity. Daniel Webster, despite a less pardonable excess, is still the oratorical god of New England. Poe's alcoholic was not as C. H. Goudiss claims, narcomania, but really an irregular periodic neuropsychosis. Goudiss, however, puts "narcomania" into a different category from that of most writers on inebriety. The drunkenness is never really the disease, but is the outcome or manifestation of a diseased state. Many great writers have been victims of narcomania, due to a highly organized nervous condition. Such were DeQuincey, Coleridge, Lamb, Burns, Byron, Baudelaire, and DeMusset.

The facts of Poe's life also followed naturally upon the circumstances of his birth and boyhood. Such parentage as Poe had gives to the world many of its geniuses, and also its dipsomaniacs. The poet was descended from two generations of actors, or, rather, poor players. Both his parents followed the uncertain profession of the stage at a period when to get a living meant a ruinous drain on all mental and physical attributes. Great nervous excitement, a brain struggle with poverty, no time to give to the maternal thoughts of the coming child, whose germinal status was unfit, could produce nothing but the psychopath. The pair died young, and their orphan boy, at the age of two, was adopted by a childless, wealthy merchant, whose wife indulged the child in every caprice, and stimulated his vanity by making him exhibit his precocious talents to her admiring friends. As a boy of six he used to stand on Mr. Allan's dessert-table and drink healths to the com-

pany and make speeches. A child thus born and nurtured seemed predestined to an irregular and profligate manhood. Poe was born with an unstable nervous organization, and was a silent sufferer of intense psychic disturbances, which forced him finally to seek oblivion in the delirium of alcoholic intoxication. In his poetic prayers and fantasies the neurologist can see the suffering and recognize the feeling of hopelessness ever present in the victim of dipsomania. The dipsomaniac attacks, we read, are symptoms of disorganized brain-cells. Each attack naturally weakens the resisting power, and augments the basic cause. The result is an increase of frequency in the attacks until the somatic end. Poe's infirmity was evidenced as a schoolboy. He was capricious, of a violent temper, and frequently showed uncontrollable impulses, all of which would now be regarded by the neurologist as symptoms of deep physiologic concern. At the University of Virginia, as a young man, his predilection for the nervous excitement of gambling, and his craving for alcohol, showed a psychopathic condition. 'Poe's passion for strong drink,' says one of his fellow students, 'was marked and peculiar. It was not the taste of the beverage that pleased him, for he would seize a full glass and drain it in a gulp. This usually satisfied him.' Unlike the drunkard, he did not indulge in small but frequent quantities, enjoying the flavor with sips and smacks. He was the true psychopath, who poured down just enough to quiet his horrible restlessness. He was possessed by furious, maddening storms that drove before them uncontrollable impulses whose license is impassioned; and the helpless poet, mentally alienated, sought rest and oblivion in alcohol. He knew naught of time, friends, or responsibility of self. After the attacks, memory of acts, words, time, was a dismal blank, and fear, introspection, and despair were all that remained. Upon the complete return to sanity the real self was asserted in the refined, gentlemanly, conscientious Poe. In the happy lucid intervals Poe worked under high mental pressure.

The psychologist easily understands the reason for Poe's intensity, his cosmic terror, and his constant dwelling upon the aspect of physical decay. He lived alternately a life of obsessions and lucidity; and this duality is the cause of his being so shamefully misunderstood, so highly praised, so cruelly blamed. Dark, sometimes dreadfully dark, is the page on which are written the records of genius, but there are few darker than the melancholy history of America's greatest lyric poet. More than half a century has passed since 'the unhappy master, whom unmerciful disaster followed fast and followed faster,' died at the untimely age of forty in the city of Baltimore. But not yet has the world accorded him a recognition worthy of his genius, or condoned the faults that were constitutional rather than vicious.

In regard to derivative words, which comprise so large a share of English, the Unabridged Dictionary published in the name of Noah Webster, as well as his world-wide fame as the greatest lexicographer of any age, are based solely upon the unrequited labor of James G. Percival.

In 1854, through the influence of General Chetlain and other friends and admirers, Percival was appointed geologist of the State of Wisconsin. His first report was published in 1855, and he was engaged on the second report at the time of his death. A complete edition of his poems was published in 1859. This association of poetry and science is, as Andrew Wilson has pointed out, a very natural one. Milton was versed in the science of the earlier seventeenth century. Erasmus Darwin, a broader evolutionist than his grandson, Charles, was a poet-scientist whose work on practice went through several American, English and European editions. It was a great favorite with American physicians of culture, like Samuel L. Mitchell and others, who, at the beginning of the nineteenth century, had grasped the biologic aspects of developmental pathology in its relations to practice. Goethe owes much fame to his biologic researches,

which cleared from obscurity the law of economy of growth, propounded by Aristotle.

A time after leaving Yale he engaged in teaching. He was graduated in medicine at Philadelphia, was later appointed assistant surgeon, U. S. A., and detailed as Professor of Chemistry to West Point. In 1827 he resided at New Haven, where he lived a long time in a garret after the manner of the old poets, having very few companions save his books, cabinet and herbarium. He read with fluency Latin, Greek, French, Spanish, German, Italian, and Slavonic languages. He could take a work in any of these tongues never before seen by him and read it into English with as much correctness and ease as one of his own poems. For several years he was engaged in a geological survey of Connecticut. When his report was laid before the legislature a proposal to give him its copyright, after a certain number of copies were printed for the use of the State, was adopted. On this occasion a legislator pointed out that in his examination of Connecticut geology Percival had walked over every hill, plain, and morass in Connecticut with his basket on his arm and his bag on his back, stopping at the farmhouses at night, and resuming his examination at early light. He was engaged in this work for five years at an annual salary never exceeding \$300.

Percival was not "eccentric" in the popular acceptance of the term. His life and character were in perfect accord with his early environment. He was abnormally sensitive, and was utterly destitute of self-confidence or power of self-assertion. Morbidly self-conscious and painfully fearful of provoking comment or criticism from his fellows, he instinctively, not studiously, excluded himself almost entirely from social intercourse. The most erudite scholar of his age, endowed with the divine spirit of poesy in the highest degree, he walked the earth like a starved mendicant or felon. His manner was as abject as that of a beggar, and as furtive as that of a hunted criminal. When a boy his extreme bashfulness and gaucherie, combined with his manifest poverty and ascetic habits,

made him the butt of caddish fellow students. The brutality of these so affected him as to produce that unsocial, retiring manner which was the curse of his life. His first contributions to the press, now treasured as gems of American literature, were, as Beriah Brown points out "damned by derisive sneers at their unprepossessing author." Shortly after the first reviews of his poems he was found insensible in the stone quarry where he had attempted suicide by butting his head against the rocky wall. Between 1841 and 1844 he contributed to the press metrical versions of German and Slavonic lyrics. At various intervals between 1821 and 1843 he published small volumes of poems.

Necessity compelled him to become the "ghost" of newspaper men of more assurance. He was the sole author, compiler, and editor of the first edition of Webster's Unabridged Dictionary. He gave not only the definitions but the root and history of over 16,000 words derived from other languages, including the then known written languages of the world—thirty-nine in number—of every one of which he had some critical knowledge. Regarded in this light, it is the most wonderful literary labor every performed by one man. No other lexicographer ever accomplished it. Samuel Johnson was the literary wonder of his age. Horace Walpole says of him: "His dictionary is a surprising work for one man, but sufficient examples in foreign countries show that the task is too much for one man, and that a society alone should undertake to publish a standard dictionary." Webster's first dictionary was merely a compilation from standard authorities, with the addition of purely American idioms and etymology, exhibiting neither originality nor research, being adapted only to the use of schools—to the learners and not to the learned. It was rejected as a standard by British institutions of learning on account of the slang phrases, with purely local significance, which it attempted to introduce into the English language and also it must be admitted for fully justified reforms in spelling, like 'labor' for 'labour', etc. The American derived

these from the Latin, rejecting the absurd Norman-French derivation of the British.

Percival's life was marred by unfavorable environment at the adolescent. Had his surroundings been more favorable at that time, America would have had a medical poet-scientist like Erasmus Darwin, but greater.

TO BE CONTINUED.

SELECTIONS

CLINICAL NEUROLOGY

AN INTERESTING MONOGRAPH by Dr. Shepherd Ivory Franz on Variations in Distribution of Motor Centers. One of the Psychological Review Monographs gives the following:

"Summary: In the hemispheres which were investigated there was found a number of points, or areas, the stimulation of which gave movements unlike those of the surrounding regions. This was especially marked in some of the hemispheres while others showed none of this crossing or combination of control. The number of cases in which arm movements were found to be associated with the stimulation of leg areas, or arm movements associated with leg movements when the surrounding areas gave only leg movements, is greater than that of leg movements from the stimulation of arm areas. A number of non-stimulable, or relatively non-stimulable zones, were found surrounded by normally stimulable areas."

NEUROPHYSIOLOGY

NEUROMUSCULAR PHYSIOLOGY

EXHAUSTION AS DISTINGUISHED FROM FATIGUE.—The nature of exhaustion is far from being understood. It differs from mere fatigue in that something in the body is actually used up and cannot be made good vicariously. In fatigue we may imagine an organism as clogged with its own slack, so that restored equilibrium is a matter of elimination. In exhaustion the muscular tissue has perhaps run out of glycogen, or the adrenals and other structures can no longer supply adrenalin. At a meeting of the United Berlin Medical Societies on March 23 (Muenchener medizinische Wochenschrift, May 4,) Brugsch

recognized in war exhaustion a special affection due to the cooperatoin of psychic and sensory insults, lack of nutrition (due to failing appetite,) and excessive bodily exertion. These subjects may recover readily if they can sleep for three or four days at a stretch. There may be severe sequelae, as persistent low blood-pressure, psychasthenia, myasthenia, and ready disposition to infection. Tuberculosis is often lighted up. The sequelae are largely dependent on the fact that adrenalin production is still in abeyance. Until it is restored recovery is impossible. The deep-seated nature of exhaustion is shown by the fact that a similar picture develops in cancer patients.—Editorial Medical Record.

NEUROCHEMIC PSYCHOLOGY

CLINICAL CONTENT OF BLOOD SUGAR.—Although clinicians have for a long time recognized the possible clinical importance of a determination of the sugar content of the blood, the routine use of this procedure has been neglected on account of the difficulty of the techique and the large amount of blood required. The improved method devised by Kowarsky about two years ago has apparently overcome these handicaps. With a modification of its technique, the simplicity and accuracy of the Kowarsky method have appealed to S. Strouse, assisted by I. F. Stein and H. Wisely (Bulletin of the Johns Hopkins Hospital, June, 1915) who with its aid have made an important clinical study of the sugar content of the blood.

The necessity of determining the variations in the blood-sugar is illustrated by a case of obstinate furunculosis in a young man in whom, although examination of the urine did not reveal the presence of any sugar, nevertheless examination of the blood showed a definite alimentary hyperglycemia. This examination was indicated particularly in view of a distinct diabetic family history. In this patient a strict carbohydrate-free diet resulted in a prompt

healing of the lesions and the prevention of new ones. This case teaches an important lesson: hyperglycemia may exist without glycosuria. It also suggests two promising lines of investigation, namely, the early changes in diabetes mellitus and the interrelations between glycemia and glycosuria.

The authors conclude from a study of 61 determinations that the normal blood-sugar varies from 0.04 per cent. to 0.12 per cent. with an average of 0.84 per cent. These variations are attributed to the varying factors in the ordinary day of the normal individual, especially to the diet factor. Of course, an increase in the carbohydrate intake raises the blood-sugar. In the normal man this describes a curve which reaches its lowest limits before breakfast and before dinner and invariably shows a rise one hour after meals. To be of any value blood-sugar determinations must be performed before and after an ordinary meal containing carbohydrate.—N. Y. Med. Rec., July 17, 1915.

NEURODIAGNOSIS AND PROGNOSIS

SOFT EYEBALL.—D. Riesman, Philadelphia (Journal A. M. A., Jan. 8, 1916), says that he had his attention accidentally directed to this subject in a case of diabetic coma in which the eyeball was of almost doughy consistency. In looking over the literature he found that this symptom was first noticed by Krause in 1903, and a few papers have appeared since by Heine, Schutz, Lepine and Hertel, which are briefly reviewed. The soft eyeball in diabetic coma is not due to blood pressure changes and it is not an agonal symptom. Whether the ketone bodies play a part in its production is not definitely decided. In acidosis without coma it is not present, but since the acetone bodies are largely retained in coma then they may have a share in its production. Krause considers it a bad prognostic sign, but others have seen recovery with it. It is valuable, however, in a prognostic

sense, though further observations are needed before we can consider it absolutely prognostic. Riesman found it in two of his three cases.—*Maine Med. Jour.*, Jan., 1916.

NEURODIAGNOSIS

SYMPTOMS OF DISEASE OF THE PITUITARY BODY.—J. H. Rheim. *New York Med. Jour.*, Mar. 6, 1915—CI—438. The usual symptoms of brain tumor are not present in these cases. Headache has been found present in seventy to ninety per cent of the cases, varying in location. Vertigo and vomiting are frequently present. Convulsions occur in ten to twelve per cent of the cases, usually epileptiform in character. There is commonly present a sense of general weakness.—Excerpt by Harold Hays for Index of Otolaryngology.

CLINICAL PSYCHOPATHOLOGY

SEX ORGAN DECADENCE IN INSANITY.—“Recent histologic examination of the testicles in insane males, and of the ovaries in demented females,” says the *Jour. A. M. A.*, “has demonstrated that nature tends to limit reproduction in those who are mentally unsound. Degenerative changes and atrophy of these organs are so pronounced in some of the severe psychoses as to make procreation impossible.

“Todde compared the volume and weight of testicles from insane patients with those of individuals dying from accident or usual illness. He found that the testes of the insane were notably smaller, and that altered structure and function were present in the various groups of mental disease, and seemed, for the most part, independent of the age. The most constant and distinct lesions were found in the testicles of idiots and imbeciles, in which, not infrequently, absolute arrest in the development of these organs had occurred. In other instances,

degenerative changes were present in the spermatiform and interstitial structures of both the epididymis and seminiferal canals. There was also a marked increase in the intercanalicular tissue. In contrast to these findings are the changes occurring in dementia precox. Here a great variation was found. In some there was an alteration of the "filial" cells and therefore a diminution of function. More often, however, there was a degeneration of the cells which have to do with the production of spermatozoa, or an atrophy of the seminiferous tubules with an accompanying increase in the intertubular connective tissue. In these cases there was an absence of spermatozoa. In senile dementia, irrespective of the patient's age, function was frequently abolished and there was an atrophy of the testicles. In other cases, there was evidence of marked diminution of function. This was also found in dementia paralytica, manic-depressive insanity, and in the so-called secondary dementias. In the psychoses attendant on the late stages of pellagra, evidences of hypo function were present, which were indirectly proportional to the length and severity of the mental derangement. As one would expect, the forms of insanity of alcoholic origin have least effect on the genital organs. Nevertheless, a diminution of glandular activity usually occurs.

"After a study of serial sections of ovaries from one hundred women who suffered during life with some form of mental disease, and who died before reaching the menopause, Laura Gorster came to similar conclusions. She found that in mental disease there was either lessening or a complete loss of ability to reproduce. This was especially true in dementia precox, in which, at the age of 30 years, there was marked evidence of involution of the ovaries with an interstitial connective tissue increase and a smaller number of graafian follicles. Thus, there seems to be no relation between the changes in the sexual organs of the insane and the age of the patients. The degenerative processes are apparently in

direct proportion to the duration and gravity of the mental disease.

"It is of interest in this connection to recall the work of Fauser and others who found, by using the Abderhalden method, that there are circulating in the blood, in dementia praecox and other mental disturbances, enzymes which are specific for testicular protein in the male and ovarian proteins in the female.—*Med. Times*.

PSYCHOTHERAPY

THE ILLINOIS STATE HOSPITALS FOR INSANE have adopted the eight-hour work-day system and find that the increase in wages, when the system is fully in operation will be very little. The Illinois State charity service now has under consideration a plan to have the employees, especially in the State hospitals for insane, live off the grounds. While this plan seems to offer some advantages, one of the greatest arguments against its adoption would be the absence of the employees to assist in case of fire or other serious crisis.—*Med. Fort*.

THE PHYSICIAN has an unusual influence in his community if he will. In the first place, his education is way above the average; he is called into friendly and confidential counsel by many if he deserves their confidence; he should be a safe adviser because of his intellectual equipment. He should be a leader among men, and not solely a physician and healer to the sick.—*Danils' Red Book*.

CLINICAL NEUROLOGY

A CASE OF TRAUMATIC DIABETES IN A NEURASTHENIC is reported by Doctor Ringe in the *Berlin Medizinische Klinik* following fracture of several thoracic vertebrae. There was no evidence of injury to the fourth vertebra.

There was a medico-legal aspect to this case, the court accepting eleven years later the view that the accident caused the diabetes and death which followed and awarded damages to the legal heirs. The case is recorded in the April 18th Number et seq., of the above named Journal. This is especially interesting in its medico-legal aspects.

COMPOSITION AND STRUCTURE OF URINOD (Dehn and Hartman). The empirical formula of urinod has been established as C_6H_8O .

Urinod is insoluble in hot dilute solutions of hydrochloric and sulphuric acids; therefore it cannot contain a basic (or alcohol-oxygen or ether-oxygen) group.

Urinod is optically inactive, hence, if not a racemic mixture, it cannot contain an asymmetrical carbon atom.

Urinod reacts with bromine contained in carbon tetrabromide, giving a strong evolution of hydrogen bromide and a solid bromo-derivative; hence it is a cyclic compound. Additional evidence of its cyclic nature is obtained from the formation of a dinitro-derivative (golden needles melting at 78 C.) by treatment with cold, dilute nitric acid.

Urinod reacts with semicarbazide, forming a compound melting at 254 C. Therefore it is either a ketone or an aldehyde.

Urinod reacts with hydroxylamine phenylhydrazine and hydrogen sulphide, forming derivatives not possessing the characteristic odor of urinod. These compounds indicate the presence of a carbonyl group in urinod. No known compounds having the same empirical formula as urinod possess the same properties.

The oxidation of urinod by ammoniacal silver nitrate, also by aqueous solutions of potassium permanganate, indicates close relationship with hydrobenzene derivatives.

THE REACTION OF THE CIRCULATION TO PSYCHIC PROCESSES [Ueber die Normale und Pathologische Reak-

tion des Blutkreislaufs auf psychische Vorgänge]. (Neurolog. Centralbl., Jan. 16th, 1914.) Bickel, H.

Bickel has made about a thousand observations on nearly eighty persons, in health and in disease (psychoses and neuroses), in order to ascertain the behavior of the blood pressure on the plethysmographic volume-curve under psychic stimulation, especially mental work, intellectual pleasure and displeasure, sensory satisfaction and dissatisfaction, and attention. For the continuous observation of the oscillations of blood pressure he used Uskoff's sphygmo-tonograph.

The blood pressure, whenever changed at all, was found, alike under normal and pathological conditions, to be increased by these stimuli, especially attention and pleasurable excitation. This increased pressure could not be due to increased arterial tone alone, but also indicated increased cardiac activity. The volume-curve (as other investigators have previously found) behaved differently under normal and under pathological conditions. In normal subjects (except for pleasurable stimuli) the volume of the arm and ear sank, that of the brain and abdomen rose; the blood would appear, with rise of the general pressure, to be transferred from the exterior to the interior of the body. In the pathological subjects, on the other hand, the normal vaso-constrictor innervation from the cortex to the exterior parts of the body is partly or entirely broken; instead of decrease of volume at the surface, there is, especially with mental work, increase. The abdominal phenomena are less clear, as the passive distention due to increased pressure is counteracted by an antagonistic narrowing due to greater expansion at the surface.—Excerpt by Havelock Ellis from *Jour. Ment. Science*.

COENESTHOPATHIA [Les Cenesthopathies]. (L'Encephale) Austregesilo and Esposel.—As coenesthesia stands for the consciousness of the physical self, so coenesthopathia is the corresponding psycho-neurotic syndrome, representing morbid perversion of that consciousness.

Normally, the message from body to brain attracts little attention; in neurotic and psychotic conditions generally these sensations become more or less prominent and tinged with anxiety, but not usually to a degree constituting coenesthopathia. This is only reached when the symptoms generally are found to revolve round the coenesthesia.

The authors accept the division of troubles of coenesthesia into (1) hypercoenesthesia, or feeling of exaggerated typical well-being common in general paralysis and sometimes in mania; (2) hypocoenesthesia; and (3) acoenesthesia, the diminution or abolition of euphoria found in hypochondriases and sometimes in melancholia; (4) paracoenesthesia, the most frequent and variable group because it includes all the transformations of physical personality, zoopathias, demonpathias, etc., as found in alcoholism, dementia praecox, etc.

Coenesthopathic changes have great symptomatic importance, as they sometimes play the chief part in a neurosis or psychosis, although they may also constitute an isolated syndrome. The latter part they most frequently play in women, especially from puberty to the menopause, when they become enormously frequent. They also become exaggerated at the menstrual period.

Coenesthopathic troubles are more often found in great cities than in the country, and some races, like the Latin and Jewish, are specially liable to them. Chronic infections and intoxications in general, hereditary taints and over-strain, favor their appearance.

The coenesthopathias are mostly cephalic and, especially, abdominal. They constitute the basis on which other pathological manifestations of emotional, ideational, or motor order rest. Formerly the patients were regarded as neurasthenic, hysterical, obsessional, or hypochondriacal, and this indicates the task of differential diagnosis. On the psychiatric side it is necessary to eliminate chronic hallucinatory conditions. We are concerned with patients of tainted heredity, and constitutional lack of balance; the sensibility is abnormal, but there are no delusions.

Seven cases are presented. The treatment chiefly relied on is psycho-therapeutical, and must sometimes be patiently prolonged.—Havelock Ellis.

CLINICAL PSYCHIATRY

THE INSANE IN SWITZERLAND AND SPAIN.—The official figures for 1910 published by Koller for the four leading cantons of Switzerland, show insane and feeble-minded to a total of 6 to 9.7 per thousand inhabitants. Koller accepts this as evidence that at least one in every one hundred persons there is mentally deficient or insane. The *Revista Clinica de Madrid* compares these with statistics in Spain, which show 1,000 insane in the asylums of the Madrid province, to a population of 900,000, that is, one in every 900 persons in the province is an inmate of an asylum.—*Jour. A. M. A.*, Feb. 20, 1915.

THE WORK OF A MADMAN.—Erich Muenther, the professor of languages who exploded a bomb in the reception room of the Senate in the Capitol at Washington, attempted to kill J. Pierpont Morgan, and boasted in a letter to his wife that he had taken steps to encompass the destruction of a trans-Atlantic liner, was undoubtedly a madman. Since 1906 he had been a fugitive from justice with an indictment for the murder of his wife hanging over his head. He had disappeared from Cambridge, Mass., where he had been an instructor in Harvard university, and for nine years had gone about the country unmolested. He was recognized by several former associates who did not feel themselves obliged to notify the authorities of Massachusetts of his whereabouts. Until recently he had been teaching German at Cornell under the name of Frank Holt. Yet everything points to the fact that he was mentally unbalanced and had been for a long time. His death by suicide in the Mineola, N. Y., jail made it difficult, is not impossible, for the police to learn whether he worked alone or was

the agent of an organization of conspirators. That he was inspired by partisanship for Germany to commit the crimes he did cannot be questioned, but there is no proof that he was anything more than an irresponsible madman acting on his own unbalanced impulses. The outbreak of fire on the liner *Minnehaha* in mid-ocean on July 8th was promptly ascribed to Muenther, but it was by no means a unique case. At least four attempts to destroy allied ships by secreting bombs on board have been revealed recently.—Leslie's, July 22, 1915.

We place this record of a lunatic at large for possible future references.

ALCOHOLISM AND VICE.—But we can go still further, and from mental states manifestly pathological, pass to other psychical and abnormal states, which are common to the vicious and to criminals and which offer varied forms of alienations, under the names of instructive madness, and moral perversion, an analogy, which has caught the attention of many writers. This parentage of vice and insanity has been stated many times.

French authors have given us many remarkable examples and Maudsley considered it beyond the question of a doubt. We fully concur with what Fere says on this subject, viz: "Vice, crime and insanity are not separated by social prejudice, but united by their common character of fatality. If one refuses to accept this intimate relation, it is from no fault of scientific proof, but, from looking at the question from a practical standpoint, which immediately presents itself to the judgment." It is not surprising to see that vice, debauchery and all the moral perversions, which show themselves at the beginning of insanity, properly speaking, and which appears so often in the other psychopathies, transmitting itself from parents to children, favoring in these last the beginning of alcoholism. Drunkenness does not show itself in these cases as a direct consequence, but results indirectly from a low moral and intellectual state of

those who yield to it. We can judge better of this as we notice more observations.

Lucas tells us of a father, son and grandson who were carried off in the prime of life by the most shameless drunkenness and most unbridled passion for women. We have remarked this same feature in hereditary inebriates in connection with venereal and alcoholic excesses. We here submit two characteristic examples from the thesis of Grenier, (1882.) Obs. 68 (Grenier). Thee . . . Amable, 20 years. Imbecility and microcephalus. Convulsions in infancy. Mother debauched, very nervous. Excess in absinthe drinking, maternal uncle inebriate. Many coarse kindred and inebriates on the maternal side. Two brothers died young from convulsions. One brother drunkard.

Obs. 69. (Grenier.) Duc. . . . Eugene, 18 years. Convulsions until three years old, walked at 20 months, tardy speech, *blesite* violent anger, imbecility, facial asymetry. Paternal grandfather, bad conduct and a drunkard. Father an absinthique, inebriate, in fact beastly intoxicated every day. Soldier during the Commune. Paternal uncle drinker.

Sodomite. Suicide when 28 years old.—Le Progres Medical.

THE MENTAL PATIENTS OF PENNSYLVANIA HOSPITAL AT PHILADELPHIA constituted ninety-four per cent of all admissions during the year, of whom eighty per cent were first admissions. Their average age at the time of admission was forty-one years. The youngest was twelve; the oldest ninety. Sixteen, or eight per cent, were aged sixty-five or over. The duration of mental illness before admission was less than one month in forty-nine cases, one to three months in thirty-three cases, three to six months in thirty cases, six to nine months in fifteen cases, nine to twelve months in five cases, twelve months or more in fifty-eight cases, or thirty-one per cent. The average of such previous duration in patients who recovered this year was twenty-six weeks.

Recoveries of mental patients numbered fifty-three, eighteen men and thirty-five women, being twenty-eight per cent of such cases admitted. The shortest duration of mental illness before admission was two days, the longest two years, the average fifteen weeks. The shortest period of hospital treatment was seven days, the longest twenty-three and a half months, the average twenty-six weeks. The whole duration of attack averaged 41.44 weeks.

TRAUMATIC DEMENTIA PRECOX.—The somatic basis of dementia precox has frequently been debated, as well as the syndrome-like character of the affection, in virtue of which it might exist under a variety of circumstances. Among the systemic causes invoked to explain the nature of this affection are autointoxication, anomalies of internal secretion, and trauma. At a meeting last summer of the Hamburg Medical Society (*Berliner klinische Wochenschrift*, August 16), Weygant described the case of a youth who fell from a scaffolding and suffered a contusion of the ribs. Soon afterward his mind seemed to fail and he threw himself from a balcony, sustaining a cranial injury. He now developed a condition highly suggestive of dementia precox, but passed at once into a cachectic state, ending in death. The autopsy finds were inconclusive. They were all microscopic and seemed to consist of old and recent miliary hemorrhages. Degenerative phenomena were in evidence and there were no evidences of inflammation. The author seems inclined to bring this case under the clinical domain of traumatic psychosis.—*Med. Rec.*

DEMENTIA PRECOX STUDIES. The Adrenal and Dementia Precox.—By Bayard Holmes, M. D., Chicago. From the Chicago Medical Recorder, issue of May, 1915.

There are peculiar relations existing between the adrenal gland and the brain. In 1788 Wagler (*Blumenbachs medizinische Bibliothek*, 1788, iii, 629) noticed that hydrocephalus and absence of the adrenal medulla were

coincident and Lomer (*Vir. Arch.*, 1883, xcvi, 366), Czerny (*Cent. f. alg. Path. u. p. Anat.*, 1899, x, 281), and J. Levy (*Thesis*, Berlin, 1913), as well as a long line of other observers have confirmed this early discovery. The destruction of the adrenals is fatal to laboratory animals. (Brown-Sequard, 1856-7, *Comp. rend.*, xliii, 422-25, 542-46 and xlv, 1036-39, and Elliott, *Jour. Phys.*, 1914, xlix, 38-53.)

The adrenal is a compound gland. The cortex, which is the most glandlike in structure, takes no part in the production of adrenalin, but seems to be engaged in the elaboration of a cholesterin-like substance of highly polarizing qualities both as a liquid during life and as a crystal after fixation. In the healthy gland the cortex is loaded with this peculiar, doubly refracting, fatty substance, always occupying the cortical cells themselves, and not at any time infiltrating the lymph spaces. Even the cells of those aberrant and remote remnants of the cortex to be seen frequently in the body of the medullary portion of the gland are crowded with the polarizing liquid crystals of lipid material. It is remarkable that nowhere else in the healthy human body is this lipid found except in the corpus luteum, but it is a common phenomenon of disease, and I have long wondered at these liquid crystals in the epithelium of the gall bladder in that form of cholecystitis that is attended by tachycardia and myocarditis.

THE WET BRAIN IN DEMENTIA PRECOX.—If we are to learn anything about the etiology of dementia precox there must be an exhaustive study of cases of sudden death at the beginning of this disease. There can be scant hope of discovering the source of a fire in the debris and ashes, and the wrecks of dementia precox that make up three-fifths the population of our mad houses are poor material for research and etiologic study.

Tables of vital statistics rarely notice dementia precox as a cause of death and some of the international schemes of nomenclature do not even mention it. In the United

States census mortality statistics for 1913 it appears under the head of (68) "other forms of mental alienation."

The deaths from dementia precox in the first onset of acute symptoms are not negligible in number and they ought to be most suggestive for research for etiology. As a rule, the acute symptoms come on suddenly after a more or less prolonged period of chronic symptoms indicative of a subtoxemia. This period covers months or years. The intensity of the acute symptoms bears no recognizable relation to the duration or the character of the prodromal period, and there are no indications yet recognized on which the onset of the fatal catatonia may be anticipated by treatment or foretold.

These sudden deaths in catatonia are deaths from the brain, but the origin of the sudden "wet brain" is still a mystery. In Franz Nissl's last monograph (April 11, 1914) he gives a very brief anamnesis of each of two cases of sudden death in catatonia and the results of his autopsies made immediately after death. We regret exceedingly that the reports so far made on these two cases make no mention of the morphologic condition of the glands of internal secretion so uniformly found to be dystrophic in the majority of cases of dementia precox. His whole report, outside of a few generalities, is taken up with a microscopic study of the brain. Since our attention has been forcibly drawn to the sex glands, the thyroid, the adrenal and the thymus, his reference to their general appearance, without giving their weight and histologic structure (not to mention biochemic properties), are to be regretted. It is well known that the adrenal function in chronic cases of dementia precox is much disturbed. The blood pressure is low and the injection of adrenalin in 0.5 c. cm. doses of the 1-1000 solution (Parke, Davis & Co.) will not raise it. (Willi Schmidt, *Munchen. med. Wehnschr.*, 1914, lxi, 336.) The relation between the adrenal gland and the brain was early recognized and has been recently much studied. All anencephale are devoid of adrenals also and probably nodes of the aorta, and Czerny found in all cases of

hydrocephalus an absence of the adrenal medulla. Southard has recently demonstrated hydrocephalus in practically all his autopsies on dementia precox cases.

Notwithstanding these deficiencies in Nissl's contribution, it is very valuable and should be studied by every psychiatrist. His two patients were known as Wahler and Guggelmaier. Wahler was 35 years old when he died. He was born in 1877 and died in 1912, after a suddenly appearing catatonia of only ten days. He had been in the postal service since adolescence. His first symptoms appeared about the twenty-fourth year and consisted of very gradual changes in character and disposition, and eleven years later as he came home on a short leave of absence from the postal service, which he had filled without receiving criticism, he quite suddenly went bad. A doctor saw him the second day and the third day he was taken to the psychiatric hospital at Heidelberg, where he died seven days later of catatonia, it being the 28th day of November, 1912.

Immediately after death cerebro-spinal fluid was taken by lumbar puncture. There was a slight increase in the cell elements. The ammonia sulphate reaction of Nonne-Apelt showed opalescence. The Nissl albumin content was 2.8. The Wassermann was negative. The Goldsol reaction of Lange showed blue in the first five tubes.

The autopsy one hour after death showed many interesting features. The dura mater was quite firmly attached to the vault. The convolutions were much flattened and the sulci obliterated. The pia was very delicate. No abnormality was found in neck, thorax or abdomen except some enlarged mesenteric glands. The brain appeared hard on section. Only a small amount of cerebro-spinal fluid was contained in the ventricles. The brain weighed 1,590 grm. By means of a plaster cast the cranial capacity was found to be 1,590 cc. Therefore the brain was very heavy. The body weight of Wahler was not given, therefore it is not possible to apply Tigge's formula. It is not necessary to go into the details of the histo-pathology which absorbs most of

Nissl's attention. It must be read by an histologist to be appreciated. We are interested in the teachings of this case to the clinician, the psychiatrist and the investigator.

Wahler died of a "wet brain," of cerebral congestion, of intra-cranial pressure. He died from the brain. It was a brain in which the solid, colloid, albuminous material had accumulated. Southard found his dementia precox brains, even in the chronic resting state, too heavy to be normal, whether tested by Reichardt's formula (ratio of cranial capacity to weight). (The Italian and French pathologists long ago and frequently since have called attention to this fact.) This death that overtook Wahler was like the death that follows concussion of the brain which is attributed to edema of the brain. Potzl discussed this subject five years ago (*Jahr. f. Ps.*, 1910, xxxi, 244-327) and although he had less data, he came to the same conclusion, namely, that catatonia is attended by "brain swelling."

There is another way to look at Wahler's death. It is well known that sudden death occurs in the status lymphaticus and some of these patients die in catatonia, and many dementia precox patients have some of the marks of status lymphaticus, but Nissl distinctly notes that Wahler had none of the signs of this condition on his tongue and no enlarged thymus. Frankhauser has tried to establish some relation between the high brain weight in dementia precox and that of status lymphaticus (*Z. f. d. ges. N. u. Ps.*, 1912, viii, 413). It is perfectly obvious that there is some intimate relation between the catatonia and the "brain swelling," but no one has yet determined which is the cause and which the effect. (Krueger, *Z. f. d. ges. N. u. Ps.*, 1913, xvii, p. 80, and Reichardt, *Monatschr. f. Pschiat.*, 1908, xxiv, p. 285.)

NEUROPATHOLOGY

THE CAUSE OF CANCER.— The 1914 report of the Mo. State Board of Health gives us the following:

"In one sense we do not know the 'cause' of cancer, since we have not learned what induced the changes in the character and behavior of the beginning of its rebellious and destructive career. But in another sense, we have much empirical knowledge as to the 'causes' of cancer, that is we know from long recorded observation in many countries many of the conditions under which the disease develops. Foremost in this department of our knowledge is the fact that continued irritation in a given spot is frequently followed by the disease. The examples are familiar to all who have read even the simplest accounts of the disease. Chimney sweeps develop cancer of the skin from irritation by the soot. Workers in tar distilleries, in the manufacture of grease or briquettes also seem specially subject to skin cancer. Something in tar and pitch under such continued exposure develops warts which break down and become cancers. Men employed in dye works have been observed to suffer from cancer of the bladder. Cancer of the tongue from irritation by the pipe or cigar is commonly reported. Even long continued irritation is not always necessary and cases are recorded where cancer seems clearly to have developed after a single blow or wound or fracture of some bone."

DAMAGE TO CORTICAL VISUAL CENTERS BY A RIFLE BULLET.—The case was that of a soldier, aged thirty-four years, who was shot through the back of the head, five and one-half inches posterior to the outer boundary of the orbital margin on a line one and one-fourth inches horizontally, posterior to the tip of the mastoid process and three inches superior to that point, transversed through the back of the head extending slightly upward and backward. Upon regaining consciousness, after nine days, he was unable to see anything beyond distinguishing light from dark, or coarse hand movements.

The pupillary reactions to light, normal; but rather poor to convergence and accommodation. The fundus showed only slight hyperemia of the papillae. The general

condition of the patient excellent. No change in the eye condition occurred during the subsequent four months.—Dr. R. Grawich Waddy, Ophthalmoscope. Hannemann Monthly.

THE ROLE OF ANOPHELES PUNCTIPENNIS SAY IN THE TRANSMISSION OF MALARIA.—As the result of recent experiments conducted in New Orleans, Louisiana, *Anopheles Punctipennis* Say has proved itself to be an efficient medium for the development of the sexual cycle of the organism of tertian malaria, *Plasmodium rivax*.

Of previous attempts to determine the exact status of this species of *Anopheles* the most thorough was that of Hirschberg who in a series of carefully executed experiments obtained only negative results in infecting *A. punctipennis* with the gametes of estivo-autumnal malaria. As further evidence of this negative role, he states that no cases of malaria were found to be developing in a certain section of Maryland where the species was common, and that he had never found naturally infected *punctipennis* here or elsewhere as had been done with *A. quadrimaculatus*.

Dupree, however, in a list of efficient hosts of malaria includes *punctipennis* as having been so determined by himself. No other details are given and Knab in 1913 was inclined to the belief that he had in reality experimented with *A. punctipennis*, which is now recognized as a distinct species and as an efficient host.

Anopheles punctipennis is one of the common species of the genus in the United States and because of its abundance and wide distribution the question of its agency in the spread of malaria is an important one. To record the fact that the parasites of one form of the disease may successfully develop in this species is the purpose of the present note, which will be followed by a more detailed account of experiments.

On November 6, 1915, six specimens of *A. punctipennis* were allowed to feed on a patient in whose blood had been demonstrated the gametes of tertian malaria. The mos-

quitoes had been bred from larvae and before and after the blood meal were given only raisins and water as food. They were kept at room temperature and were dissected and examined in the usual way after intervals of 7 days (two specimens), 9, 18, 20 and 24 days. The first four showed a moderate to heavy infection of the stomach with oocysts. In the one examined on the twentieth day were found mostly rupturing and ruptured oocysts and an intense invasion of the salivary glands with sporozoites—the form which is inoculated by the mosquito into the human host. The sixth specimen alone proved to be negative and in this one the condition of the ovaries suggested the explanation that this may have been due to the ingestion of only a small amount of infective blood.

On a second case of tertian malaria having a much fewer number of gametes, a single specimen of *A. punctipennis* was fed on November 12. Upon dissection on December 2, a light infection of both the stomach and glands was found to exist.

In each experiment bred specimens of *A. quadrimaculatus* were fed on the patients as controls and these also showed a high percentage of infection upon subsequent examinations.

The demonstration that *A. punctipennis* is an efficient host for tertian malaria does not necessarily indicate that it is an efficient carrier of other forms of malaria and, in fact, from Hirschberg's results we may anticipate that such is not the case.

The writer is indebted to Dr. C. C. Bass and Dr. F. M. Johns of the laboratories of clinical medicine of Tulane University for assistance in the work upon which this statement is based and to Mr. F. Knab for the verification of the determination of the mosquito.—W. V. King, Bureau of Entomology, U. S. Department of Agriculture. From Science, Dec. 17, 1915, Correspondence.

NEUROTHERAPY

IS OBSTETRICS A LOST ART?—In a paper read before the Chicago Gynecological Society R. W. Holmes (Surgery, Gynecology, and Obstetrics, November, 1915) bitterly arraigns the profession for the apparently increasing tendency to resort to cesarean section under conditions which he does not consider to warrant such a severe operative procedure; and in the discussion of Holmes' paper, W. A. N. Dorland compares the operative furor for cesarean section at the present time to that seen in pelvic surgery some 15 or 20 years ago when ovaries were removed on all sorts of indications. Certainly many of us have heard reports of cases of abdominal, and especially or vaginal, cesarean section concerning which we have felt that the interests of mother and child would have been equally well if not better served by a less drastic measure; and we feel, therefore, that Holmes' paper is worthy of serious consideration.—*Med. Rec.*, November 27, 1915.

MEXICAN DRUGS.—The warlike disturbances in old Mexico are responsible for many troubles of manufacturers and importers of botanical drugs. Mexico is the source of quite a number of our medicinal plants, and some of these are practically unobtainable. It seems to be unsafe for the peons, who usually work under the supervision of a professional collector, to venture far away from settlements, and even when they succeed in gathering a shipment, there is no guarantee that it will ever reach the border. For more than twenty years *Cereus Grandiflorus*, used in the manufacture of Cactina Pillets, has been cut on the mountain slopes of the Vera Cruz range situated in the state of Tamaulipas. The Sultan Drug Company states that very few shipments have found their way into the United States, and at one time they were greatly concerned about the safety of one of their collectors, an American, who has lived in Mexico many years. For some time past the Sultan Drug Company

has been carrying at least a year's supply of *Cereus Grandiflorus* ahead, as the dangers of this unsettled condition were anticipated.

SCIATICA.—Ten to 20-grain doses of ammonium chloride, three or four times a day, are said to be a "specific" in sciatica. Give in half a glass of water.—Med. Stan. Doc.

LIMITATIONS OF SALVARSAN.—Seii-Kwai Med. Jour. records that:

G. Inouye and S. Hamanishi report their experience in the treatment of 1,780 cases of syphilis during the past five years. They find that whereas the conjoint use of salvarsan and mercury in early cases of syphilis was satisfactory, nevertheless 30 per cent of these were incompletely cured or show a recurrence. In the early cases treated only with salvarsan intravenously there were 70 per cent of recurrences and incomplete cures. In early cases treated with the subcutaneous injection of only 0.6 gram of salvarsan the results for the following three years were far better than with intravenous injection; but in advanced syphilis the results were just the reverse, recurrences taking place more frequently with subcutaneous than with intravenous injection.

OPIUM ALKALOIDS AND THE HEART.—The action of the the opium alkaloids, individually and in combination, on the coronary artery and the coronary circulation, is discussed by D. I. Macht, Baltimore. All three methods, the perfusion of excised hearts, studying the effect of drugs on excised arterial rings or strips, and observing the effect of drugs on the coronary circulation through the open chest in the living animal, have been employed by him with the six principal alkaloids, morphin, narcotin, papaverin, codein, narcein and thebain. The alkaloids used have been analyzed, and found to have a too small percentage of impurities to produce any material physiologic result. The following are his conclusions from his

investigations: 1. Of the principal opium alkaloids, some affect the coronary circulation markedly, others slightly, and still others not at all. 2. Morphin produces a mild dilatation of the coronary, codein a very slight one, narcotin and papaverin, a very marked one, and narcein and thebain none at all. 3. A combination of morphin and narcotin produces a much lesser relaxation of the coronary artery than than produced by each of them.

ADRENALIN HORMONE CONTROL OF SYMPATHETIC.—

The control of the sympathetic nervous system by the chromaffin hormone produced in the medullary portion of the adrenal glands, makes these organs of supreme importance in numerous conditions. Cannon, of Harvard, has written a wonderfully interesting book on the relation of pain, fear, rage and the emotions to disease and in it it is clearly shown that the principal factor connecting these manifestations is the hormone adrenin. This explains the clinical value of preparations of this character in many disorders including cholera (with its extreme pain and collapse). shock (with its associated acute adrenal insufficiency first intelligently discussed by Sajous, of Philadelphia about 13 years ago), post-febrile collapse or asthenia (conditions definitely traced to hypoadrenia and just as definitely benefited by the obvious therapeutic procedure—the administration of adrenalin or similar products), and other important disorders.—Dr. Henry R. Harrower, recent address before South Calif. Med. Soc., South. Calif. Practitioner, Dec., 1915.

BALNEOTHERAPY.—Fifteen springs at Hot Springs, Warm Springs and Healing Springs, Virginia, were tested for radioactivity at their source in July, 1913, by Profs. Ernest Zueblin and J. C. Hemmeter, of the University of Maryland. They used the fontactoscope of Engler and Sievcking, and their table shows the results in mache units. It is evident that the radio-activity is high. Healing Springs is thus intermediate between Kreuznach and Baden Baden; Warm Springs, higher than Baden

Baden; the Hot Sulphur Spring, higher than Gastein; the Boiler Spring and Magnesia Spring higher than Landeck and Gastein.

Mache units in a bath of 200 liters, including the values for water, gas and dry residue combined:

	In 200 Liters	In 1 Liter
Radium Kurhaus, Joachimstal.....	120,000	600
Magnesia Spring, Hot Springs, Va.	56,000	800
Boiler Spring, Hot Springs, Va.	42,800	214
Landeck, Silesia, Germany.....	40,000	200
Hot Sulphur, Hot Springs, Va.....	31,400	157
Gastein, Austria.....	30,000	150
Warm Springs, Virginia.....	26,800	134
Baden Baden, Germany.....	25,000	125
Swimming Pool, Hot Springs, Va.	21,854	109
Healing Springs, Virginia.....	17,284	86
Kreuznach, Germany.....	11,200	56
Nauheim, Germany.....	5,720	28
Pistyan, Hungary.....	4,680	23
Soden, Taunus, Germany.....	4,400	22
Nenndorf, Prussia, Germany.....	4,000	20

Strong radioactive springs may be taken to include those having at least 100 mache units per liter; medium, with 50 to 100 units per liter; and weak springs with 20 to 50 units; in quantities less than this the radioactivity is probably too little to designate them as such.—Guy Hinsdale, American Thermal Springs.

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Any comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or "mouths of wisest censure."

NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

CHAS. H. HUGHES, M. D., Editor and Publisher.

H. L. HUGHES, MANAGER.

Editorial and Business Offices, 3858 West Pine Boul.

EDITORIAL

NOTE TO AUTHORS—Authors will please revise their proofs and promptly return. Delay in this retards our issue.

Another cause of delay in this issue is dilatoriness at the printing office which has more interest in its commercial than its scientific output. Please pardon our tardiness this time.

WITH THIS ISSUE we had intended giving special extra space to our advertisers wherein they might speak for themselves. Later we shall try and give more space.

We hope those on the waiting list will patiently await their turn. We may say, however, that all who advertise in our pages are credible and worthy of the reader's confident consideration. We publish no fake proprietaries. Such as have space with us we confidently submit to the discriminating judgment of our readers.

ISOLATION INDUCED INSANITY is being discussed in the daily press. It is a fact that the solitary life, as that of a farmer's wife and unoccupied prisoners, tends to develop melancholia in the predisposed. That is why the farmers' wives in thinly settled sections preponderate in the insane hospitals over the ladies from the cities.

An otherwise sensible farmer brought his insane wife to me and said, "Doctor, I do not understand this. My wife was such a good woman, always at home attending to her household duties. She was the best woman I ever saw, doctor, she never went anywhere. She was no gadabout."

I answered: "That is just the reason—you never took her anywhere visiting." He replied: "We lived too far away from everybody."

There is also solitude elsewhere than in the "pathless woods." A colored woman cook brought from the country declared she must go back because "she could see out nowhere on account of the houses" of the city.

AN INHUMANE, UNWISE WAR ORDER.—The German war office has issued the following proclamation:

It has been of late repeatedly observed that our enemies are trying to buy medical books and other medical printed material issued exclusively by German firms. Led by the efforts to keep away from the sanitary leaders of inimical foreigners, the fruits of German medical knowledge, several commanders-in-chief have prohibited

the exportation of such works in their respective commands. Such a rule appears eminently proper.

It is therefore, ORDERED; that all officials having charge of ports of export, are to be informed that the exportation of all such printed medical matter which might prove of value to the health and recovery of our enemies is not for the interest of the government; and that they must take all proper means to prevent and obstruct as much as possible the exportation of all such works. A communication to the firms which publish medical books and pamphlets in the chief army districts will facilitate the enforcement of this suggestion. In case of doubt whether a given medical or surgical publication might or might not be of value to our enemies, inquiries are to be made at the Medical Department of the Ministry of War.

The Maine Medical Journal of last June very properly calls attention to this inhumane and unwise order which hits humanity at large and friend and foe alike, for Germany has friends as well as foes beyond her own boundaries. Her almost cosmopolitan system for example

THE DIVERSION OF BROMIDE from Therapy to Trench Murder has added to the wail of the widow in the wake of the war, which might be mitigated and the world's misery lessened thereby if the bromides could be brought back in cost to their old ante bellum price within reasonable reach of the relatively impecunious by being made in the U. S.

Thus the whole world suffers more or less, even among non-combatants from the cruel savagery of the criminal conflict now dominating the Christian powers of Europe.

IF THE WAR SLAUGHTER CONTINUES much longer in Europe the celibate clergy will have to be called upon to abandon celibacy and help replenish the loss of population. They have not done much, to speak of, in that direction, for many years.

A PATIENT WITH A BROKEN NECK quietly resting in the St. Louis City Hospital under approved surgical cervical immobilization was taken from the hospital by the father of the boy and an osteopathic practitioner and is reported to have died in a few hours after the osteopath commenced treatment, from hemorrhage in the cord, as shown at autopsy.

This removal and change of surgical management, from a regular to an irregular practitioner, is said to have been made possible through an unwise order of the Mayor on the hospital commission.

DR. ANDREW C. SMITH AND GOITER.—The Medical Sentinel has this to say and so say we, especially concerning exophthalmic goiter. We have the same objection to the present too frequent operation on goiter in Grave's disease, as we more than three decades ago interposed against Battey's too frequent normal oophorectomy, which we claim the honor of early correcting in the medical mind. As to exophthalmic goiter only one of our cases ever went to the surgeon and she was oophorectomized (as normal ovariectomy was at that time a fad) but not with our consent. She never recovered.

Persistent neural tranquilization treatment, systematic elimination, intestinal antiseptics and adequate and suitable nutrition and ample enforced sleep accomplished recovery. Operative fads are to be guarded against in this disease.

Dr. Andrew C. Smith, of Portland, is first of all a surgeon, yet one could not help but be struck, at the late meeting of the Eastern Oregon District Medical Society, at the prominence which he gave in his address,—the leading feature of the meeting,—to the medical care, the medical preparation, the medical features, of and associated with goiter—the topic which he so ably discussed.

Dr. Smith was speaking from a large series of surgical cases,—nearly two hundred,—yet the medical attention which he showed the subject clearly demonstrated that

he did not approach the matter from a one-sided surgical viewpoint.

We merely mention this matter now and briefly, to urge our surgeons, and especially our young surgeons, to follow the example of Dr. Smith. Remember that you are dealing with a human being, and that no matter how brilliant an operation you may be able to do, the patient has a right to have the best of medicine as well as the best in surgery. Cut and cut fearlessly, if surgery is the *sine qua non*, but if medicine without surgery can cure your patient, give him the benefit of the procedure having the least risk. In this way, you may hope to enter the list of successful physicians and surgeons, to which list Dr. Andrew C. Smith is a worthy, successful and leading, although modest, member.

NATIONAL CONFERENCE ON RACE BETTERMENT is keeping up its good work with many accessions to its enthusiastic workers for the world's welfare. Wise, worthy and eminent men and women are banded together in this worthy work and purpose.

THE WISCONSIN ASEXUALIZING EUGENIC LAW went in force November tenth, nineteen fifteen, when at the State Home for Feeble Minded ten male inmates whose ages ranged from ten to thirty years were surgically asexualized.

ME AND GOD EGOTISM IN THE MEDICAL PROFESSION—
A physician in Chicago, called to minister to a defectively born infant whom he thought might be helped to a better chance to live by a cranial operation, but would probably develop defectively any way, declined to give the babe a surgical chance, has been under discussion in the daily press. The doctor's decision to not operate or advise operation was not in harmony with the golden rule ethics of our profession which is to help to save so far as we can. The hidden reserve evolution power of defectively born infants is not a known quantity to finite minds, no

matter how self confidently assured. Nature, like Providence, moves in a mysterious way "her wonders to perform" in the evolution of human creatures from defective birth to maturity. The most unpromising at infancy sometimes surprise the world in after life.

The medical man without overweening self conceit, holds his place in the order of life as:

Nature's assistant,
Humanity's friend,
Death's antagonist,

With Science's wand, (with writer's apologies to the poets.)

We are supposed to do all we can to help Nature in diagnoses, prognoses and remedy.

Our prognoses in matters of life and death are liable at times to be at fault.

A SANE, SMART ALEX IN A LUNATIC ASYLUM at the St. Louis Sanitarium (misnomer for City Insane Hospital) got up a disgruntled attendants' strike with a grievance against bathing the patients in which a very considerable number joined.

What are nurses in Insane Hospitals for if not to properly care for the patients' bathing, facial, feet and other bodily ablutions included. The medical Superintendent very properly promptly discharged the leader and the principal adherents of the insurrection leader.

THE PERIL OF TOO SUDDEN OPIUM WITHDRAWAL, since the new narcotic law went into effect, quite familiar to expert neurologists, has had numerous public proofs of late in the deaths of many of these unfortunate habitues.

Only recently a man and wife of St. Louis died from this cause. Attempted self abandonment of large habitual doses without the aid of experienced physicians should not be attempted. An opium cure institute is the best and safest place for this experiment.

A physician, from a distant city, once came to the editor, while taking ten grains three times a day, who

restricted himself to one three-grain dose when he started at a distance of less than a day's travel, by night became so delirious that he was unintelligible when he arrived. He said he had only taken three grains once a day habitually. It was necessary to increase his dosage gradually, a grain every four hours till near the real amount he had been accustomed to had been reached, then he became rational again and confessed the truth of thirty grains daily.

The reduction and substitution was gradually begun from that amount, when after some weeks he recovered. If doctors make such mistakes with themselves they may make the same blunder or similar ones with others.

MORE ATTENDANTS FOR THE CITY SANITARIUM.—We are glad to notice this recommendation by the grand jury for this institution, formerly and more properly designated City Insane Asylum. But why this recommendation by the grand jury instead of Board of Managers?

The grand jury's recommendation is based on the need of watching convalescents to be assured as to their recovery.

But when personal mechanical restraint is not used greater personal oversight and often restraint is required, personal vigilance supplanting mechanisms of restraint such as camisoles, wristlets, straight jackets, etc. to prevent consequences of morbid insane impulses to self, other patients, furniture, bedding, walls, windows, screens, etc.

For safety, a medical head of a State Hospital for insane substituted india rubber cuspidors. He was surprised to see an insane imaginary king marching up and down the corridor where the lunatic was domiciled with the cuspidor inverted on his head as an imaginary crown.

Cuspidors in a well ordered lunatic hospital should be chained to the floor, like case records in a court room are secured to the desk, or cups to a water fountain, where the new paper sanitary goblets are not substituted.

GIVE THE WOMB A REST.—The number of cases that come to the neurologist and alienist with a previous record of too many childbirths, conceptions, miscarriages and abortions in too limited a time for the pelvic and spino-cerebral nerve centers to recuperate between the exhausting strains of ceaseless uterine functioning, developing neurasthenia and psychasthenia, prompt us to call a reasonable halt in this sexual neurasthenic developing child-carrying, child-bearing business that gives us so many mal-entoned mothers and offspring. The womb needs more rest than many mothers and fathers are disposed to give it and it will be a good day for the human race when more rest between births and abortions is allowed the organ of maternity, by more considerate wives and husbands and laws. Moderate patriotic increase in families of the robust is a social domestic virtue, but incessant sexual indulgence and families' increased of weakling progeny, is cruel, criminal and means idiotic race decadence—neurotic and psychic.

The world has too many defectives in its population, not exactly "mostly fools" as Carlyle cynically said in one of his least agreeable moods, but too many of them near fools and too many defective in brain, nerve and grosser body stamina.

We need a more rationally governed sexual life, better quality and less numerous offspring in families and from healthier sources as a rule.

Eugenic progeny does not come of health damaged parents. We should be as wise as the Greeks were on this subject, but in a more humane way. Europe is just now getting a reduction in her population, good, bad and indifferent as the Greeks did in the Trojan war, though Greece is just now saving her war material.

CLARENCE PRENTICE, M. D., in his interesting book on "the eye, mind, energy and matter," makes a point relative to the open air cure of phthisis pulmonalis and neurasthenia associated with tuberculosis to the effect that long range of vision in the field out

of doors is one of the chief tonic curative influences in connection with the open air therapeutics of this and other diseases.

Notwithstanding the rather exclusive extremes to which other oculists go as to the semiology of migraine, etc., eye strain is worthy of consideration among morbid contributory causes of certain pathic states by neurologists and the general practitioner and vice versa as ophthalmologists often discover, in the adjustment of glasses to the varying eye conditions found in certain neurothenics.

THE COUNCIL ON PHARMACY AND CHEMISTRY, A. M. A. is the indispensable chemical and laboratory detective service of the medical profession.

We rely much upon the findings of this worthy body. We do not always accept their clinical conclusions. They are better in their laboratory work than at the bedside sometimes, for instance.

They do not always consider the value and necessity in practice of placebos. They have condemned Gray's Glycerine Tonic which we have seen satisfactorily prescribed by Dr. Gray who devised it and used it successfully at the Utica Hospital for the Insane, not only to satisfy the persistent demands by certain patients for something to take but because of its salutary gastric effect, glycerine alone being an antiseptic agreeable stomachic, to say nothing of the other ingredients of this proprietary. The therapeutic conclusions of the Council are not mandatory but suggestive as to composition and should be regarded accordingly in practice by the doctor who reads the laboratory findings and pronouncements.

We acknowledge the meritorious labors of this Council in behalf of sound and antifake proprietary medication, but at the same time we claim the right to exercise private judgment respecting the selection, (with the aid of the Council's enlightenment) of our therapeutic resources from the honest and true new proprietaries as well as from the

official medicines. In the main we concur in the Council's therapeutic conclusions.

WE SHALL SOME DAY look upon our present dealings with the criminal as we now look upon what was, as Farrar reminds us, our management of mental diseases before the days of Chiarugi, Tuke, and Pinel.—F. L. Wells, McLean Hospital.

HOSPITAL NOISES ought so far as practicable to be dispensed with. I mean the tinkling metallic bells, not the belles among the nurses. But some of the latter talk too much and too loudly at times. A soft, pleasant tone of voice and manner of speech are salutary and tonic to the average patient.

THE BAPTIST SANITARIUM in St. Louis in its splendid new addition recently dedicated last October and substituted electric light calls for nurses in lieu of the old noisy bells. A good substitution. The belles among its nurses are still to be retained.

A good, comely appearing nurse in a hospital is a good addition to its therapeutic resources.

There is medicine in cheery voices and a kindly smile. She reminds of the old Southern plantation song: "She looked so neat and dressed so sweet I'd a 'gin my life to 'bin in dar."

HON. ELIHU ROOT ON EXCESSIVE WEALTH AS A CAUSE OF DISEASE.—In his address to the Union League at Philadelphia last March, elicited laughter. "Too much money does no man any good; too much money is more apt than not to ruin his children and invite for him kidney disease or hardening of the arteries." Yet he spoke with more medical truth than oratory in this utterance. The unrestrained gustatory and gastronomic indulgence afforded by unsanitarily used surplus wealth shortens many a life. It will be a fortunate day for all the people when our politicians take more account in

their pleadings with the people of matters sanitary, both individual and official. The possibility of unsanitary decadence threatens.

MR. WILLIAM PRICE HAGEE DEAD.—With profound regret we learn of the death of the honored President of the Katharmon Chemical Company. Mr. Hagee's death occurred on the third of February.

KENNETH MILLICAN'S DEATH, last year in London, was a loss much felt in the field of medical journalism of the United States and by his many friends in the medical profession of the United States.

He wrought in associate journalistic capacity on the A. M. A. Journal, N. Y. Medical Journal of the St. Louis Medical Review and as Asst. Editor of the London Lancet. He was an able and forceful writer and an amiable friend.

We miss his graceful greetings, the warmth of his cordial handshake and the charming friendliness of his disingenuous heart.

ACHILLES ROSE is gone from us. The learned and enthusiastic Grecian philologist whose soul was enwrapped in devotion to correct medical onomatology of Greek derivation. In fact he was the very Achilles of Greek onomatology. He was a champion of correct Greek coinage in medical nomenclature and in his devoted enthusiasm he would have had correct classical Greek made the language of medicine.

DR STEWART PATON who said before the Academy of Medicine last October that insanity could not be defined and who scored most of the expert testimony of the country, evidently meant that he could not define it. He evidently needs, himself, more clinical experience on the subject. He says he asked Dr. Bancroft to send cases to him for a talk. The kind of insanity that can be talked out of a person is not insanity.

THE SUBJECT OF THE MORON which Binet recently, and Hofbauer and Goddard, have done much to elucidate and which the editor of this magazine, more than a generation ago, described and saved from the gallows through securing a commissio de lunitico inquirendo of medical men,* is coming to the front now, in our courts. These cases, as well as insanity, are definable.

*The Case of Benjamin Cronenbold, Alienist and Neurologist.

CORRESPONDENCE

NOTE ON "A NEW THEORY OF KISSING", Etc., (Alienist and Neurologist, 1915, XXXVI, 253-268).—Interesting side-light is given by a letter in the latest (and unluckily the last) number of the Archiv für Religionswissenschaft, 1914, XVII, 342-343, badly translated as follows:

A Vestige of Sacred Prostitution. In Nagyhalmagy (a community in Arad County, Rumanian Hungary) a peculiar custom holds sway, greeting the Springtime. On March 15, of each year in this community, is held a kissing-fair. On this day it is permitted for all matrons and maidens at will to kiss strange men. From the surrounding district too on this day assemble all the young matrons who have married since the last Easter; they all there kiss the strangers, to heart's content. So says the "Neue Wiener Journal" of March 20, 1913. Comparison with Herodotus' account (I, 199), as to the corresponding Babylonian custom, is very instructive: replacement of coitus by kissing, and thereby a possible change from compulsion to free choice.

The rite of Mylitta (a Babylonian title of Ishtar) is described in Frazer's "Golden Bough", 3d. ed., 1914, V, 36-37-39 seq., 57 seq., 70 seq., more extended consideration of similar customs is in Iwan Bloch's "Geschichte der Prostitution," 1912, I; a monograph by E. S. Hartland is Rite of the Temple of Mylitta in Ritual and Belief, 1914. The essential thing in all the above practices is that the favros should be extended to strangers only, these being semi-sacred.—Boston, Mass., Dec. 11, 1915, Charles Edward Aab.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

MEDICAL PROBLEM OF THE CRIMINAL CLASS.—The Therapeutic Digest has the following editorial:

"The time is not far distant, let us hope, when our present penal method of handling the criminal will be past. It is not saying too much when it is stated that some day it will be considered just as illogical to punish criminals for acts committed as it was to imprison people for debt or for differing in religious or political opinion from the majority. Very considerable work is now being done along this line. Most of the more progressive American cities have a psychiatrist as a court officer in municipal courts. This should be extended to all courts of trial.

"Dr. E. R. Spaulding, the resident physician of the Reformatory for Women in Framingham, Mass., is one of the advanced thinkers who believe that the problem of the criminal class can be solved in large measure by the medical profession.

"In a recent article in the Boston Medical and Surgical Journal, Dr. Spaulding makes four general divisions of the offenses for which five hundred women have been arrested:

"1. Alcoholism (21 per cent.)

"2. Offenses against chastity, with or without alcoholism; this includes all offenses which have a probable sex basis, such as stubborn child, vagrancy, common night walker, keeping disorderly house, lewdness, fornication, adultery, etc. (58 per cent.)

"3. Offenses against property, such as larceny, breaking and entering houses, forgery, etc.; many of these cases also have offenses belonging to the first two classes (15 per cent.)

"4. All remaining cases, including offenses against the person, such as abandoning children, assault, manslaughter, etc. These comprise but 5 per cent.

"Dr. Spaulding points out that the criminal problem is one of treatment of the individual for deficiencies rather than punishment for crime. This is in accord with the findings of the Chicago court for female offenders bearing directly on sex relations. It was found by careful analysis that over 60 per cent of the women examined were found to be morons, i. e., incapable of mental or moral development beyond that of the age of twelve, although physically normally proportioned.

"If our criminals were treated as deficient rather than as vicious, a very considerable step forward will have been taken in relieving society of a tremendous burden. This viewpoint would prevent the continuous cycle of arrest for alcoholism, prostitution or petty or grave offenses; conviction at considerable cost and incarceration in a penal institution for definite time; release from such institution, and in a very short time repetition of the same cycle. A psychiatrist in connection with the trial court would have determined the deficiency of the individual, an indeterminate sentence in an educational hospital would be passed, and every effort would be made to render such lives as useful to society as possible. Considerable of the human material which is now allowed to go to waste, and to drag others with them, would thereby be salvaged. The indeterminate sentence would keep such deficient under control long enough to permit of whatever permanent improvement is possible. A psychiatrist should be in charge of the hospital, and associated with him a consulting staff of physicians and surgeons.—Nov., 1915.

BULLETIN OF NATIONAL UNIVERSITY OF ARTS AND SCIENCES.—Announcement of the Medical School, Merged St. Louis College of Physicians and Surgeons, American and Barnes Medical Colleges, 1915-1916.

Honors to the Barnes-American and Physicians and Surgeons consolidated medical schools.

Among the medical department of the National University Medical alumni announcement appears the following record of recent honors bestowed. The consolidated name is now American:

Dr. B. W. Burdick, Class 1908 (American), is employed by the National Jewish Hospital in Denver in the laboratory of that institution at a handsome salary. Dr. Burdick was formerly teacher of Pathology and Bacteriology in the American.

Dr. Raymond E. Scott, class 1910 (American), in a competitive examination for the United States Army Medical College, was one of the eleven out of one hundred and eighty candidates who successfully passed the examination and received the gold medal for research work in the Sternberg Laboratory. He was directed to assume charge of the United States Bacteriological Laboratory at Houston, Texas.

The following 1914-15 graduates have been chosen interns in the City Hospital: Adkins, E. M., Ashley, H. V.; Davis, S. S.; Ellis, E. K.; Fallet, C. E.; Kliefoth, F. H.; McRaven, Claude; Noll, E. A.; Rosegren, O.; Rosson, J. K.; Smith, A. C.; Tucker, A. O.; Tufts, E. S.

Drs. Elkins and C. P. McRaven were appointed interns at the St. Louis Baptist Hospital.

Dr. R. F. Knowles is intern at the Westminster Hospital (Presbyterian), Baden, Mo.

Dr. W. J. Eilerts received the appointment as intern at St. Anthony's.

Drs. C. O. Brown and A. Bina were appointed interns at St. Luke's.

Dr. E. D. McCarty received the appointment at the Fricso Hospital in Springfield, Mo.

Dr. E. A. Heibner, is intern at the Kansas City German Hospital.

Dr. J. C. Hethcock received the internship at the Wichita, Kan., Hospital.

Dr. P. J. Ross was appointed to the internship in the Einsworth Hospital, St. Joseph, Mo.

Dr. G. G. Kaemmerling is now Dr. Vosburg's assistant.

Dr. O. H. Meyers, Class 1913 (American), paid the school a visit.

Dr. John Young, class 1906 (Barnes), is Health Commissioner of Pontiac, Ill.

Dr. A. M. Nappier, Class 1908 (Barnes), has returned to St. Louis after five years' experience in the Ancon Hospital in Panama.

Dr. B. W. Caldwell, class 1897 (Barnes), after several years' experience as superintendent of the Santa Thomas Hospital, Panama City, C. Z., has been sent by the government to Servia to fight typhus fever.

THE WORK OF OUR HANDS.—A study of occupations for invalids. By Herbert J. Hall, M. D., and Mertice M. C. Buck.

In this volume the whole subject has been covered in a way that is both authoritative and interesting, the result being that of a work that is valuable to the general reader as well as to doctors, social workers and invalids.

The systematic use of work as a remedy and the establishment of specialized workshops and the careful study of the subject generally as a medical measure is not quite so new as the authors state it to be, especially in the state and county hospitals for the insane, but it is comparatively new to the profession at large and the general hospitals, as an auxiliary therapeutic agent of much value in certain forms of convalescence and especially during the entire treatment in many instances of insanity in its more chronic states. The author notes its use and value in eastern hospitals for the insane. But it is likewise of use and has been of great value in the institution in the central, southern and western states.

At the asylum property at Fulton, Mo., of which I know most, now called Hospital Number 1, the farmer,

gardener, or shepherd, engineer, carpenter, painter, seamstress, attendants and all other employees had patients assigned to them as helpers; pianists and other musicians, the latter being mostly attendants. The extent of the grounds was five hundred acres. Even the cook and baker got help from convalescent reliable patients at times.

The general hospitals might profit more than they do now, by affording opportunity by systematized light and congenial occupation to certain patients at times during their progress toward recovery. Congenial voluntary occupation drives away ennui and forestalls neurasthenia and melancholia.

We commend this book to the profession as an auxiliary promoter of convalescence. Price \$1.50. Published by Moffat, Yard & Company, New York.

VITAL CONSERVATION.—Physical Basis of Criminality.

We are all tempted to simplify our explanations, frequently on the basis of our personal and professional experience. Hence the wisdom of comparison of views with competent observers in other professions than our own. A consensus of interpretations thus secured will not be final and dogmatically authoritative, but it will be the safest possible foundation for practical action, when action must be taken and when neglect would be fatal.

Excluding the legally irresponsible, as the insane, feeble-minded, demented, and dismissing from present consideration Lombroso's typical "criminal-born," and leaving aside the disputed assertion that crime is a disease, directly and biologically inherited, we may safely make the generalization which is confirmed by a vast number of observers in all countries; most criminals are physically and mentally inferior. That the mental sub-normal condition is causally related to some deep anatomical and physiological defect requires no argument here; it is a commonplace of science. For our present purpose we do not need to spend time attempting to distinguish between the effects of heredity and those of defective nutrition; because inherited defects had a beginning

somewhere in the past in depressing, devitalizing conditions, just as the environment of neglect in our generation is preparing weaklings for our successors to carry on their shoulders.

At this point one is strongly tempted to declare that criminality is caused by starvation.

This paper was read in the symposium on the Physical Bases of Crime at the 38th Annual Meeting of the American Academy of Medicine, Minneapolis, June 14, 1913, by the late Charles Richmond Henderson, Ph., D. D., Prof. Sociology, Univ. of Chicago, United States Commissioner of the International Prison Commission, Chicago. It is worth consideration in connection with other aspects of crime causation.

"The greatest enterprise in the world, for splendor, for extent, is the upbuilding of a man."—Emerson.

NAUDIN AND MECDELS' LAW.—Dr. Chas. Minor Blackford in *Va. Med. Semi-Month.* for July 23rd, thus refers to this subject:

"The study of heredity received a great stimulus about the middle of the last century when, in 1850, a noted French savant, Professor Lucas, published a book entitled "*De l'heredite*,"—*On Heredity*. In this he claimed that the heredity of an organism is the resultant of two impulses, one (heredity), tending to bring about a resemblance between the offspring and its parents, and the other ("*inneite*"—inherency), tending to produce a dissimilarity. He claimed that it was on account of this latter tendency that we see in families certain members who show none of the family peculiarities, and on this tendency to vary from the typical form, Darwin and Cabell based a doctrine of evolution of species. Sir Francis Galton, a great English investigator, made an elaborate study of acts of heredity, and, with the aid of a number of co-operators, he united a large number of family trees by noting the physical, moral and intellectual characteristics of the members of the families that supplied the material. The results were worked out in a special laboratory which has been perpetuated under

the name of the Sir Francis Galton Eugenic Laboratory, and by applying the methods of higher mathematics to these results, Sir Francis and his pupils deduced an empiric law, the formula of which has changed since it was first laid down. As at first stated, Galton said that the father and mother controlled one-half of the heredity, each having one-fourth; then the four grand-parents are valued at one-fourth in this heredity, one sixteenth for each, then the eight ancestors of the third generation, the great grand-parents, come in for an eighth, i. e., a sixty-fourth each, and so on. Later a pupil of Galton, Dr. Pearson, saw that this rule did not cover all cases, and he inserted a corrective co-efficient which corresponded to Lucas' "inherent" influence, but though with this correction Galton's law applied in most cases, the formula became so complicated as to be unworkable. The same results are obtained much more simply by what are known as the laws of Mendel, and those laws underlie (the author here apologetically refers to Mendel) the study of heredity at the present time. Without wishing to detract from the fame of Mendel in the least, it should be remembered that his most important law had been discovered by the Frenchman, Naudin, about the middle of the last century in the course of some investigations into hybridization. Naudin, however, was deaf and was so isolated that he could not make the most of his works, and it is to Mendel that the fame of establishing the remarkable laws that now bear his name has fallen. His fame was posthumous. He was a monk in a convent near Brunn in Moravia, and in his leisure hours he devoted himself to natural history, especially in regard to the hybridization of plants, and while engaged in this pastime, he discovered the laws governing this act. He published them in 1868 in a little local scientific paper where they remained buried until 1900, when the Dutch naturalist, de Vries, brought them to the attention of the scientific world, but the discoverer died without knowing the fame that awaited him."

ANATOMY OF THE BRAIN AND SPINAL CORD with special reference to mechanism and function for students and practitioners by Harris E. Santee, A. M., M. D., Ph. D., Professor of nervous anatomy in Chicago College of Medicine and Surgery, Medical Department of Valparaiso University; Professor of Anatomy in Jenner Medical College, Chicago; Member of Association of American Anatomists. Formerly Professor of Anatomy in College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois, and Professor of Anatomy of Harvey Medical College, Chicago. Fifth edition, revised and enlarged, with 158 illustrations, 46 of which are printed in colors. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street.

The publishers of this valuable book state with truth that "The recent advances in human anatomy and its allied sciences necessitate the thorough revision this work has received. To place it fairly abreast of the times every section has been largely rewritten in accordance with the discoveries of the past few years. Being designed for a text-book, the subject-matter is presented in the order found convenient to the dissector. The description proceeds from the gross structures to the constituent neurones in each successive region. Wherever the embryology will assist the student to comprehend the adult forms, the development is briefly given. The embryology is more fully interwoven with the regular text than in the fourth edition."

The chapters are elaborated and illustrated by a number of new histologic and diagrammatic drawings. Some excellent illustrations also have been introduced from the fifth edition of Morris' Anatomy.

The special objects held in view throughout the book are the location of functional centers and the tracing of their afferent, associative and efferent connections. Particular emphasis is laid upon the origin, course, termination and function of conduction paths as they are met in the regular study, and the more important and better known of these paths are summed up in a final

chapter on the tracing of impulses. Function is everywhere correlated with structure; and so far as present knowledge permits, the function of each group of neurones is given in connection with its anatomical description.

The artistic work of Dr. Zan D. Klopper and the illustrations, both plain and in colors, are unique and exceptionally clarifying of the text.

No student of physiological anatomy should be without this advanced and satisfying treatise on this interesting subject above all other books of its kind. Some excellent illustrations are taken from Morris' splendid *Anatomy* which the author gracefully acknowledges.

HOW INSANITY IS STUDIED AND TREATED IN INDIANA. —“An article in the *Literary Digest* for July 24, reviews a contribution by Dr. Bayard Holmes, entitled, ‘How Insanity Should be Studied and Treated,’ is full of interest. An abstract appeared in our October issue. An Indianian in reading it will readily recognize where errors in certain insane asylums can be corrected, and he will be especially proud that it does not apply to the Central Indiana Hospital for the Insane, Dr. George F. Edenharter, superintendent.

“Here we find this situation: For sixteen years a pathological course of lectures has been delivered by prominent alienists, open to members of the medical profession and the students of Indiana University School of Medicine. The latter are compelled to attend these lectures because it is a part of the University School's curriculum. Advice is sought from those competent to give it and frequent consultations held with eminent authorities concerning the latest and best methods for the treatment of the insane. By means of the clinics each patient is carefully studied, under the direct supervision of efficient alienists. There is a hospital for the sick-insane and every possible department that can better the condition of the patients. The board of trustees, superintendent and all others in authority work in harmony for the betterment of humankind and especially

for those with impaired mental faculties."—S. E. E., Indianapolis Med. Journal.

We are glad to record the above and to note the advances manifested in the other institutions for the insane in the United States, as shown in the many excellent reports coming to us which we are also glad to receive.

They are sources of enlightenment for the profession and public and should be extensively distributed.

INDEX OF 448 POST-MORTEMS OF THE INSANE.—State Hospital for the Insane, Norristown, Pa. By Charles J. Swalm, M.D., Path. and A. M. Mann, Asst., with an introductory by Allen J. Smith, A.M., M.D., Prof. of Path., Univ. of Penn., Volume II.

These valuable autopsies speak for themselves. Physicians interested in the pathology of the insanities will appreciate this timely work from a fountain source of mental diseases done by those who know from clinical observation and dead-house knowledge of the subject.

To live with the insane, minister to them during the progress of their disease and inspect the cadaver post-mortem gives the surety of knowledge as is in this book shown.

Every physician should seek this work of knowledge and if more did so there would be fewer ignorant alienists and psychiaters making ridiculous displays of merely assumed psychiatric knowledge before the courts of law.

PAINLESS CHILDBIRTH, EUTOCIA AND NITROUS OXID-OXYGEN ANALGESIA.—By Dr. Carl Henry Davis, Associate in Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago, Assistant Attending Obstetrician and Gynecologist to the Presbyterian Hospital, Chicago.

This is the first book by a physician that discusses the various methods used in the attempt to secure painless childbirth. Here is published for the first time the results of varied experience with nitrous oxid-oxygen analgesia

in obstetrics and strong, convincing proof is given that this is the safest and best method. A timely and important book. Price, one dollar. Forbes & Co., 443-5 S. Dearborn St., Chicago, Publishers.

AMERICA'S PRESSING MORTALITY PROBLEM.—By E. E. Rittenhouse, President, Life Extension Institute, Inc. A public address (condensed) prepared at the request of the Committee on Public Health Education of the Medical Society of the County of New York, and delivered at the Academy of Medicine, February 2, 1915.

The purpose of this paper is plainly and directly to invite attention to the adverse mortality conditions from the degenerative diseases of middle life and old age, which have become a serious national problem. The mortality charts are introduced to enable us to quickly grasp the trend of this mortality and its significance.

The charts and the texts are instructive and suggest remedies for threatening race decadence.

Published under the auspices of the Life Extension Institute, Inc., 25 West 45th Street, New York City.

THE UNIVERSITY OF MISSOURI BULLETIN, Volume 16, Number 12, General Series 1915, No. 5. Announcement of the School of Journalism, 1915-1916. University of Missouri, Columbia, Mo. The Bulletins of these prosperous and up-to-date Schools composing the entire University except the Rolla School of Mines and Metallurgy are always welcome, especially the splendid showing in illustration and text of the up-to-date School of Journalism. We would like to give this announcement more space but the reader can obtain complete announcement for the asking.

The University of Missouri is one of the oldest institutions in the West and ranks among the best American schools of higher education in the Union. Few schools in the United States have made the advancement that Missouri has during recent years. The enrollment for 1914-15 is more than 3,800.

The fundamental aim of the University is the development of the highest and most efficient type of citizen. The school is supported by the state and returns of the state practical service: a full *quid pro quo* in efficient service for all the state's appropriations. The university grounds cover more than 800 acres.

REPORT OF TRACHOMA A MENACE TO AMERICA.—National Committee for the Prevention of Blindness, Room 510, 130 East Twenty-second Street, New York.

Although many documents bearing on this subject have been issued during recent years, there has been no such complete compilation as is presented in this latest report. This document is offered as a popular presentation of the subject from a scientific source for the education of laymen as to the prevalence of Trachoma, a grave and threatening disease of vision and with methods adopted for its control and eradication. The use of technical terms has been avoided so far as possible in order that all phases of this important health menace might be readily understood by the general public and its serious consequences avoided. Apropos of this report it justly illustrates and condemns the dangerous use of the roller-towel.

LA PSYCHOLOGIE DE L'ATTENTION, par N. Vaschide, Directeur-Adjoint au Laboratoire de Psychologie pathologique de l'Ecole des Hautes-Etudes et Raymond Meunier, Chief des Travaux au Laboratoire de Psychologique de l'Ecole des Hautes-Etudes (Asile de Villejuif). Paris, Librairie, Bloud et Cie, 7, Place Saint-Sulpice, 7. I et 3, Rue Ferrou, 6, Rue du Canivet, 1910.

This collection of experimental psychology and metaphysics is addressed to professors, physicians, and students and to the cultured public who are interested in contemporary science in the domain of psychology and psychiatry.

Its tabulated experiments will enlist and interest the searcher after truth and accuracy in problems of the human mind. The author is eminently known to the scientific world.

SOME FACTS PERTAINING TO THE WASSERMANN REACTION in Relation to Diagnosis and Treatment, by R. B. H. Gradwohl, M. D., Director the Ricord Hospital and Gradwohl Biological Laboratory, St. Louis, Mo. From the Southern Medical Journal, Journal of the Southern Medical Association, Mobile, Alabama, June, 1915. Gradwohl is a diligent and trustworthy laboratory investigator, a reliable clinician, believes in Wassermann test in both blood and spinal and is reasonably dubious as to the permanent cure of syphilis without persistent treatment and especially close scrutiny as to therapeutic result. This brochure is well worth reading. (Read before the Physicians' Club, St. Louis, January 14th, 1915.)

A MECHANISTIC VIEW OF WAR AND PEACE.—War, as the surgeon sees it, is the theme of this book. Dr. Crile was recently in charge of a hospital in France. He here describes various phenomena that he noted among the wounded and gives a mechanistic explanation, not only of these phenomena, but of war in general, interprets German Kultur and indicates ways in which peace may be promoted. One of the most unusual and at the same time valuable features of the work is its record of cases and experiences that came directly under Dr. Crile's observation. By George W. Crile, illustrated, price \$1.25, Macmillan.

THE OPEN COURT PUBLISHING COMPANY sends us a list of its scientific and educational books from 122 South Michigan Ave., Chicago, the whole being embellished with portraiture of eminent leaders, both ancient and modern, of philosophy, psychology, mathematics and religions of the world, copies of whose faces have appeared at different times in the pages of the Open Court, not the least attractive among them being the intelligent and handsome face of its distinguished editor, Dr. Paul Carrus, also the editor of the Monist, devoted to the philosophy of science.

A CLINICAL MANUAL OF MENTAL DISEASES.—By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Octavo of 425 pages, Philadelphia and London: W. B. Saunders Company, 1913. Cloth \$3.00 net.

This is a very excellent and handy book, based on the annual course of lectures by the author at the Jefferson Medical College, but prepared from a purely practical point of view. The subject is presented in a simple yet thorough manner, without enlarging the volume beyond a convenient size. As a text-book for the student of medicine as well as for a guide in the every day needs of the practicing physician, Dercum's Manual will prove highly satisfactory.

DEMENTIA PRECOX STUDIES.—The Physical Basis of the Insanities and their Biochemic Study. By A. S. Justschenko, Privatdocent at the Imperial University of Dorpat and Active Fellow of the Imperial Institute for Experimental Medicine at Petrograd. Translated from the German with Notes and Subsequent Literature by Bayard Holmes, B. S., M. D., Late Professor of Surgery, College of Physicians and Surgeons, Chicago (1893-1910), Secretary of the Association of American Medical Colleges (1894-1902). Prepaid, 75 cents, (paper covers.) Index Office, Chicago.

"SPEAKING OF OPERATIONS" Perfectly Painless.—By Irvin S. Cobb. Price 50 cents. Illustrated by Tony Sarg, George H. Doran Co., Publishers, New York.

This is a laughable contribution to the humorous side of surgery. It is a fit companion to the Medical Pickwick and should be read in the Pickwickian sense.

It is smile and laugh provoking and rest promoting. Everyone who has read it seems to be of the same exhilarated opinion. It is by the author of "Paths to Glory," etc.

HEALY'S "THE INDIVIDUAL DELINQUENT."—This is an interesting review by F. L. Wells from the *Psychological Bulletin*, July 15, 1915. Vol. XII, No. 7 of this author's "Textbook of diagnosis for all concerned in understanding offenders."

During some six years the author has had brought to him, largely through court sources, a great many cases of young persons, who have failed to adjust themselves socially, and have reacted along criminal lines. The book is a record of this experience.

LES ACTUALITES MEDICALES. DIAGNOSTIC DES MALADIES DE LA MOELLE.—This little volume contains a mine of neurological instruction by a neurologist of merit and renown. Dr. Grasset as Professor of the Montpellier University Clinical, has ample opportunities for acquiring the requisite experience for writing such a book. The book is brief but accurate and practical, being confined only to the spinal marrow disease. J. B. Bailliere & Fils are the well known publishers, 19 Rⁿe Hautefeuille, Paris.

ANNUAL REPORT OF THE SURGEON GENERAL of the Public Health Service of the United States for the fiscal year 1914.

These reports are always valuable to physicians and laymen. They show great sanitary interest and research especially for the general medical welfare and should be sought by all the people as well as physicians.

The failure and inadequacy of the Friedman tuberculosis treatment is shown and much data on tuberculosis and health resorts is reported.

CEREBRAL EDEMA (WET BRAIN) IN CHRONIC ALCOHOLISM.—By C. E. Scelesh, M. D., Director, House of Correction Hospital; and Arthur F. Beifield, Ph.B., M.D., Clinical Assistant in Medicine, Northwestern University Medical School. On a too little known and discussed subject. An especially important consideration of a grave aspect of alcoholic toxemia.

WHAT IS THE BEST END-POINT OF THE REACTION IN THE FROG-HEART METHOD OF DIGITALIS ASSAY?—By H. C. Hamilton and L. W. Rowe. From the Research Laboratory of Parke, Davis & Co., Detroit, Mich. Studies from the Research Laboratory Parke, Davis & Co., Reprint No. 77, 1915. Reprinted from the Journal of the American Pharmaceutical Association, January, 1915.

BIOLOGICAL PRODUCTS.—Antitoxins, Curative Sera, Bacterins, etc., etc. By the H. K. Mulford Company, Chemists, Philadelphia, and the principal cities of the U. S.

This is an interesting brochure for physicians, giving detail knowledge of processes, uses and dosage from this well-known house.

CLINICAL STUDIES IN THE RELATIONSHIP OF INSANITY TO CRIME—By Paul E. Bowers, M. S., M. D., in the Dispatch Print, Michigan City, Ind.

A timely, important and meritorious contribution from a right source of clinical experience for physicians, jurists and philanthropists.

THE TREATMENT OF PARESIS BY INJECTIONS OF NEOSALVARSAN INTO THE LATERAL VENTRICLE.—Graeme M. Hammond, M. D., and Norman Sharpe, M. D., Professor of Diseases of the Mind and Nervous System, and Neurologic Surgeon, respectively, Post-Graduate Medical School and Hospital, New York.

PLASTIC SURGERY—CORRECTIVE AND PALLIATIVE REPAIR—IN THE TREATMENT OF MALIGNANT DISEASE.—By William Seaman Bainbridge, A. M., ScD., M. D., C. M., New York. From the New York Medical Journal, Incorporating the Philadelphia Medical Journal and the Medical News, May 1, 1915.

THE CURE OF THE "INCURABLE," A PLEA FOR MORE ACCURATE DIAGNOSIS AND MORE CAREFUL PROGNOSIS IN MALIGNANT DISEASE.—By William Seaman Bain-

bridge, A. M., Sc. D., M. D., C. M., New York City. From *American Medicine*, New Series, Vol. X., No. 7, Pages 525-534, July, 1915.

THE MULFORD DIGEST contains much useful information for the physician besides the promotion of the Mulford's advertisements. Among its interesting items are antiseptic vaccination against typhoid, etc., in the British army. Dr. Byrnes' (of Johns Hopkins) Mercurialized Serum in Cerebrospinal Syphilis, etc., etc.

"REST COTTAGE" FOR NUTRITIONAL AND HYGIENIC TREATMENTS.—A photo of this new building at College Hill, Cincinnati, Ohio, is received. We are much impressed with its appearance and surrounding grounds as desirable adjuncts to the therapeusis of the Cincinnati Sanitarium.

FROM LIPPINCOTT COMPANY, Philadelphia, comes a handsomely bound in flexible cover and handy little Worcester pocket dictionary, with other information besides definitions, such as weight and coin tables, wages, population throughout the world, size and depths of oceans, postage rates, analysis of foods, etc., etc., and all for one dollar.

A STUDY OF RESPIRATION AND CIRCULATION IN PICROTOXIN CONVULSIONS. The Possible Bearing of this Study on the Theories of Pathogenesis of Epileptic Convulsions. Lewis J. Pollock, M.D., and William H. Holmes, M.D., Chicago. From *Archives of Internal Medicine*, pp. 213-222.

ILLINOIS STATE HOSPITALS MEDICAL ASSOCIATION held an interesting meeting at the Jacksonville State Hospital, Jacksonville, Illinois, February 24 and 25, 1916. Many interesting papers were read and views of members were exchanged on current medical matters.

THE ROCKEFELLER FOUNDATION.—Annual Report, 1913-14, Second Edition, The Rockefeller Foundation, 61 Broadway, New York.

An interesting report for physicians and philanthropists. Doctors will get much light from this report on hook-worm disease.

COURSE OF LECTURES to be given at the Pathological Department of the Central Indiana Hospital for the Insane, located at Indianapolis, Indiana, 1915-1916. Sixteenth Annual Program.

This is a worthy and valuable aid to the advancement of psychiatry in medical practice.

PRINCIPLES OF CRIMINAL ANTHROPOLOGY.—By Arthur MacDonald, Washington, D. C., Honorary President of the Third International Congress of Criminal Anthropology of Europe. From the Maryland Medical Journal, Baltimore, Md., December, 1914.

CHRONIC INTESTINAL STASIS-FLUOROSCOPIC AND X-RAY DIAGNOSIS IN THE LIGHT OF OPERATIVE FINDINGS with illustrative cases. William Seaman Bainbridge, A. M., Se. D., M. D., C. M., New York City. From the Journal of the Michigan State Medical Society, March, 1915.

CRIMINAL RESPONSIBILITY.—By Philip Coombs Knapp, A. M., M. D. From the Journal of Criminal Law and Criminology, Nov., 1915. Read before the Boston Society of Psychiatry and Neurology and the American Association of Jurisprudence.

RESEARCH DEPARTMENT OF THE CHICAGO HOUSE OF CORRECTION.—Devoted to the Study and Treatment of Asocial Types. John L. Whitman, Superintendent; Charles E. Seeleth, Director Medical Department; Samuel C. Kohns, Director Psychopathic Department; Chicago House of Correction Press.

THE CLIMATE OF CALIFORNIA.—From the Course on Climatology in the Medico-Chirurgical College, Philadelphia, 1915. Bulletin of the Medico-Chirurgical College of Philadelphia, February, 1915. By Guy Hinsdale, A.M., M.D., Hot Springs, Va.

AMERICAN THERMAL SPRINGS.—Same author. From the Medical Record.

A new departure in the treatment of inmates of Penal Institutions.

OBSERVATIONS ON PELLAGRA AND ITS TREATMENT.—E. H. Martin, M. D., Hot Springs, Arkansas. From Pan-American Surgical and Medical Journal.

An interesting paper reporting many cases by Salvarsan and controverting the Maise causation belief.

CHRONIC INTESTINAL STASIS.—A.—Types of Cases. B.—Preventive and Medical Treatment Outlined. By William Seaman Bainbridge, A.M., Sc. D., M.D., New York City.

AUSSI PAR LE MEME AUTEUR. Comptes rendus hebdomadaires des Seances de la Societe de Biologie du 18 Juillet 1914. Serum Salvarsanise Administre par voie Intraspinal (in vivo.) Presentee par M. Levaditi.

SOME FACTS AND PROBLEMS OF HEREDITY.—By Charles Minor Blackford, M. D., Staunton, Va. Read before the Post-Graduate Medical School of the Augusta County Medical Society, Staunton, Va.

GLUTEAL MYOSITIS—A Condition not Heretofore Described.—By Norman Sharpe, M.D., and Percy Willard Roberts, M.D., New York. From Medical Record, June 26, 1915.

THE INTERNAL SECRETIONS—Some Clinical Aspects Illustrated.—By Wm. Seaman Bainbridge, A.M., Sc.D.,

M.D., C.M., New York City. From the *Maine Medical Journal*, August, 1915.

THE EYELIDS AND LACHRYMAL APPARATUS OF BIRDS.—Dr. Casey A. Wood, Chicago, Ill. From *Ophthalmology*, July, 1915.

This paper is of both special interest to the comparative and human anatomist, physiologist and physician. (Illustrated.)

A STUDY OF LOCOMOTOR ATAXIA AND KINDRED DISEASES, Based on the Treatment of 600 Cases. By C. H. Burton, M. D. and Frank Burton, B. S.

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RUGGED PSYCHOLOGICAL TREATMENT OF THE NEUROTIC. Read before the Medical Society of the County of Rensselaer, April 13, 1915. By George M. Parker, M. D. From *Albany Medical Annals*.

INOCULATION EXPERIMENT WITH PURE CULTURE OF SPIROCHAETA HYOS—(Studies on Hog-Cholera.) Walter E. King and Raymond H. Drake. From *The Journal of Infectious Diseases*, Jan., 1915.

OPERATION OF MASSACHUSETTS' LAWS FOR HOSPITAL OBSERVATION IN CASES OF ALLEGED MENTAL DISEASE AND DEFECT.—Henry R. Stedman, M.D., Boston. From the *Journal of the American Medical Association*.

A COMPOSITE DISCUSSION OF THE THERAPY OF SYPHILIS.—By R. B. H. Gradwohl, M.D., St. Louis, Mo., Director of the Ricord Hospital. From the *Urologic and Cutaneous Review*.

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IS GENIUS A SPORT, A NEUROSIS, OR A CHILD
POTENTIALITY DEVELOPED?*

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IMAGINATION, a greatly misused term, is so misused
not to conceal thought but to disguise its absence,
and its replacement by primitively occult twists. This
conception designates as imagination, not products of
trained intellect but obsessions, hallucinations, delusions
and survivals of primitive folk-lore.

To the limitedly educated mind of the average philis-
tine, insane delusions seem akin to poetic fancy because
he has never passed from the tyranny of custom and, to

* Continued from Feb. 1916

his misoneism, novelty is productive only of incertitude. Indeed the delusions of the insane are so much akin to his own mental limitations that he is very apt to look upon them as evidences of sanity while he denounces the fancies of the poet or artist, the opinions of the scientist or the creed of the ethical teacher, which cause him more mental perturbation, as emanations from cranks. In politics this type of philistine has more than once denounced the "golden rule" as an "iridescent dream" of a lunatic. Such philistinism pleases the misoneism of the mediocre, whence the enthusiasm over platitudes and the reign of the philistine in newspaper art, literature and science.

A tendency exists to ignore its generalized types resulting from that ascent whence

"Striving to be man, the worm
Mounts through the countless spires of form."

From this evolution further occurs as Emerson² sings:

"I trained his brain to music,
I armed his soul with skill,
I moulded his face to beauty
And his heart the throne of will."

Occultly inclined novelists like Hichens who pride themselves on the supposed freedom of imagination from the clogs of realism, are biased by this philistinism. Thus Hichens³ pictures as an imaginative man the victim of a pygmalionesque obsession anent the Sphinx. By such minds occultism is regarded as products of imagination, not evolutions from fetichism and primitive cosmic philosophy folklore intertwined and modified. Narcissus, from this viewpoint, is a parable on male vanity (a school-boy not inaptly described Narcissus as the man who was mashed upon himself), a spontaneous product of Greek imagination. As J. G. Frazer⁴ shows, however, Narcissus is an expanded survival of the widespread belief that reflection of the body in water or in a mirror entraps the soul. This belief leads to the still extant practice of covering up mirrors in a house where death happens.

In many countries all shining objects are then covered. To it is also due the blame of ill-luck from breaking a mirror.

Prohibition of images and portraits by the second commandment and its evolution in the Koran are another phase of this belief "As with shadows and reflections," remarks Frazer, so with portraits which are often believed to contain the souls of persons portrayed. Persons who hold this belief are naturally loath to have their likenesses taken, for if the portrait be the soul or a vital part of the person portrayed, whoever has the portrait can exercise a fatal influence over the original."

Behind making wax images, melting them⁵ before a fire or stabbing them lies this belief. Here were turned to malign purposes fetichism and taboo. These images are often cited in legal procedures against witchcraft and wizardry. The symptoms which resulted in Charles IX from arsenic phthisis and haemophilia were charged to them.

George Moore⁶ describes a strikingly illustrative phase of this fetichism. Two Irish boys destroyed a statue based on their sister as a model, not from pseudo modesty, but evidently from a supposed danger to their sister who was the model. Their parish priest was evidently not a little puzzled to understand the motive. Discussing the matter in its broad sociological relations Moore⁷ says that Pope Borgia was on the throne, and a reactionary priest was being told that everybody was prepared to admit in theory that Jesus was an interesting figure, but, for the moment, everybody was anxious to talk about a new torso that had been unearthed. But instead of running to see the Greek God, and contributing to the general enthusiasm by his praise of the pectoral muscles, Savonarola gathered a few disciples about him and told the people that a much greater discovery would have been some of the tree on which the Saviour hung. Of course, Borgia did not like signing the order for the burning of Savonarola and his monks, but he could not allow the Renaissance to be stopped,

and if he had not intervened, the Renaissance would have stopped at Fra Angelico; Pinturicchio might have been allowed to continue his little religious anecdotes, but Mantegna would have been told that his vases and draperies harked back to the heathen, before Christ, and as likely as not Botticelli's light-hearted women might have had tears painted into their eyes.

An upset of conventionality is always followed by advance and reversions to primitive mental states both are often intermingled. The 'wild image breaking of Carlstadt, denounced by Luther, was a reversion to this old fear of images intermingled with a fear of what was considered idolatry where the symbol became the thing symbolized.

Puritan individualism was marred by an antiphallic reaction against Roman symbolism. This led to the English art barrenness of the seventeenth century which so puzzled Macaulay.⁸ "It is not" he remarks "easy to explain why a nation which was so far before its neighbors in science should have been in art so far behind. At the close of the reign of Charles II there was not a single English painter or sculptor who is now remembered." Pornographic tendencies of Charles II's time which so badly marred literature helped the antiphallic tendencies in crushing out art careers. The Long Parliament had made war on art when it ordered certain pictures of Charles I burned as blasphemous and all others sold.

Cromwell, who saved Raphael's cartoons, was a patron of art as witness the famous "paint me as I am, sir." The witchcraft epidemics (aided by society physicians like Sir Thomas Browne, to whom a denier of witchcraft was "not merely an infidel but an atheist") revived the old fear of portraits as dangers. The great American pornographer, Anthony Comstock,⁹ lately removed from a post-office censorship for his costly zeal in seeing evil thus expresses this:

"In the Garden of Eden, after Adam's fall, 'the human form divine' clothed its nakedness, and since then there have existed emotions of modesty and shame.

Pagan painters and sculptors, who disregarded these principles, debased the communities in which they lived by their evil inventions. Ephesus was a center of art during the most refined period of Grecian art, and yet was a city of base immorality. In Pompeii and Herculaneum Roman art prevailed. Recent excavations made by the explorer's spade have resurrected evidences of the utter debasement of the people of the buried cities. The painters and sculptors of those cities have recorded the standard of immorality which brought down fire and brimstone from heaven to blot out the cities. The pages of history are stained by the orgies of Sodom and Gomorrah. They gloried in their shame until the judgments of God blotted them out of existence. Wherever artists have been allowed to place their degraded conceptions of woman's form upon canvas and intrude them before the masses, the morals of the people have gone down—cursing the community."

"The recent snortings of contempt by 'artists,' 'poets,' and writers of sensational and false attacks in the daily papers prove the ignorance of our opponents, demonstrate the weakness of their case, proclaim their utter disregard for morals, and their total lack of that high and refined chivalry which strikes down the hand that would denude the sacred form of woman, and the still more sacred form of young girls, and then place them upon the public streets to be gazed at by those who simply gloat over them to their own debasement.

"The sneering abuse and libels of my opponents may meet with the approval of those who gloat over the immorality of so-called art, but they cannot detract from the proper enforcement of law in the interest of public morals. They may worship the creature more than the Creator, but they may not become a law unto themselves. They may howl and roar with contempt at law, morals, and the agency that enforces the law in the interest of morals. Sir Caspar Purdon Clarke may snort and sneer at the enforcement of law in the interest of public morals in this country. If he will consult

the records of the higher courts in England he will find that the very principle which governed our action in the Art Students' League case was established by the Lord Chief Justice and a full bench in the Queen's Court, England, in 1867. Says that court: 'What can be more obscene than many pictures, publicly exhibited, as the Venus in the Dulwich Gallery? It does not follow that because such a picture is exhibited in a public gallery, photographs of it might be sold in the streets with impunity.'

"If some silly person turns them loose to mangle, to bite, and destroy helpless children, it is justifiable to kill them. The man who does it does not interfere unduly with the pets of the museum. The act is fully justified in order to save life. So the indecent conception of a debauched imagination, transferred to canvas, may be tolerated in the art-gallery, but not be permitted to prowl at large, endangering the morals of persons open to such degrading influences. When artists and poets combine to force their degrading products upon the public at large, in violations of the wholesome principles which safeguard society, they must use other weapons than sneers, ridicule, and libels. Art and poetry are not above morals. They are not privileged to destroy the character, befoul the morals, or sear the conscience of any boy or girl. I cheerfully take my stand between the advocates of the nude in art and the beloved children of this country, sneers, ridicule, and decision to the contrary notwithstanding."

Prudery of judges is often an extreme expression of sadism or masochistic pruriency. This was singularly well shown in the great legislator, Judge Jeffreys. He repressed harlotry by ordering street walkers (not courtesans of the court of James or Charles) to be stripped in winter and brutally flogged in the presence of the mob. In the developments anent the London Cleveland St. den (of sexual perversities) judges of peculiarly rigid "morality" figured. The discoverer of a debauched imagination in art has generally a pornographic mind.

The auto-erotic influence of asceticism in the Middle Ages generated the absurdly exaggerated desire to put out of sight the existence of the body. Artists attenuated corporeal forms until on their canvas the body represented merely a thought. The raiment in which the body was delicately and gracefully draped served as vesture to this thought and contributed, according to de Maulde,¹⁰ to immaterialize it. This reaction against beauty unadorned affected most the pornographic minds. Arentino indulged in the most virulent invective against the realism of Michael Angelo. The Council of Trent led a crusade for purging the churches of too life-like anatomies. Pope Paul IV, the "breeches-maker," caused some veracious details of Michael Angelo in the Sistine Chapel to be covered with gauze, and generously presented the Virgin with the dress he thought she needed badly.

George Moore,¹¹ discussing this auto-erotic asceticism, points out that the warrior, Pope Julius II, brought back to art "the paganism of Michael Angelo, Raphael, Del Sarto, Leonardo da Vinci and Donatello. These five great artists lived contemporaneously at Florence. The art of Michael Angelo is as pagan as that of Phidias. "The Last Judgment" is not an anecdote, but merely a pretext for drawing. Michael Angelo chose it for the same reason as Phidias chose "Olympus"—because it gave him an opportunity of exhibiting man in all his attributes and perfections. In "The Holy Family" Raphael discovered a like opportunity. To make the Fornarina seem more beautiful he placed a child in her arms and another against her knees. Leonardo was not less a pagan than Raphael; it was pagan mysticism that inspired "Our Lady of the Rocks" and "St. Anne."

Hostility to art which occurs in persons pornographically inclined arises in part from this prejudice. It crops up in many creeds. Tolstoy's attitude, while in part a reaction from the idolatry of the Greek church, has both these factors. Savonarola displayed the same tendencies in his "Procession of the Vanities" whose subsequent bonfire destroyed so many precious art objects.

This asceticism played a part in Savonarola's martyrdom, as George Moore shows.¹³

The quaintest expression of pygmionism and Narcissianism commixed is the jealousy which certain women regard art objects and female figures in dry goods store windows. In a recent will contest in Chicago¹⁴ a testator was shown to have been so jealous of a statue as to have served as a nude model of it and to have had herself photographed thus, for comparison by the admiration of friends. In small cities women complain of the undue attraction figures in store windows have for their husbands and hence regard these as indecencies which should be suppressed by law.

These primitive notions of the essential impropriety of art still dominate the bourgeois, especially since broader views lead to uncertainty and thus cause mental perturbation, whence the confusion of imagination with primitive thought. Imagination, Feuchtersleben¹⁶ shows, is in a comprehensive sense, that operation of the mind by which it receives, retains, recalls and combines the ideal images furnished to it by the coenaesthesia and by the senses, for all these actions are manifestly links of one chain. At the first step, this operation is called the faculty of conception; at the second, memory; at the third, reproductive fancy and at the fourth, productive fancy. In this last the imagination rises to that sphere where it appears as productive or creative and which is called, in the stricter sense of the term, fancy and in its spontaneity, poetic power. Fancy deceives us when it claims an absolutely productive or creative power. This power is conditional and cannot exist without matter from the store of the imagination in the first place. Fancy only fashions this matter, which is always more than merely putting it together (the eyes of Juno, nose of Apollo, brow of Minerva and smile of Venus would produce an absurdity, not a masterpiece of fancy.) Fancy is, therefore, productive in the form. Fancy is most peculiarly that which distinguishes the individual. In this sense, we are also to seek in the fancy for the foundation of

peculiar talent; nay, even with respect to the arts, even of genius. Fancy harmonizes all the higher energies, thought and will with sensation and all the inferior energies with thought. It harmonizes all sensations and conceptions with each other. These harmonizing qualities of fancy constitute it the nurse of the intellectual as the vegetative power of the mind, for as humorous Hippell not unaptly says, "Everyone is mentally weak whose powers of imagination are weak, for fancy is the lung of the mind."

What here is true of art is true of literature. People do not recognize that Mrs. Grundy's prunes and prisms has much to do with early opinions which she later revised. Things are coarse, not in themselves, but from the fashionable viewpoint of the hour. A pose of the kind which makes rural visitors "paint the town red" in a supposititious town fashion appears in discussions of obscenity in literature. This is blatantly exhibited toward that great source of much modern literature, the *Decameron*. This offspring of ignorance and innate coarseness appears in men who ignore all that is humorous and beautiful in the *Decameron*, to settle with gloating on what is coarse. In contrast is the pure-minded Macaulay. Before he was 15, Morrison remarks,¹⁸ we find him recommending his mother to read Boccaccio and weighing him against Chaucer, to whom he infinitely prefers him. The same preference is exhibited by Hazlitt, who remarks of Boccaccio, that of him he cannot express half his admiration. Boccaccio's story of the Hawk, Hazlitt¹⁹ could read and think of from day to day, just as he would look at a picture of Titian. Hazlitt sees, like Macaulay, the literary beauties of necessity, and does not settle on the coarseness which a coarse mind would instinctively do. This coarse side has prevented the mind which denounces the alleged pornographic from seeing even the humor of what to-day, told in negro dialect, would appear intensely ludicrous only. That there is an immense change in the point of view is apparent in the anecdote told by Sir Walter Scott of his great grand aunt, Mrs. Keith of Ravelstone, a daughter of Sir John Swinton,

of Swinton, who lived with unabated vigor of intellect to a very advanced age. She was very fond of reading, which she enjoyed to the last of her very long life. Once when Sir Walter Scott and she were alone, she asked him had he ever seen Mrs. Behn's novels; he admitted the charge. She then asked whether he could get her a sight of them. He said with some hesitation that he believed he could, but that he believed she would like neither the manners nor the language, which approached too near that of Charles II's time to be quite proper reading. "Nevertheless," said the good old lady, "I remember them being so much admired and being so much interested in them myself, that I wish to look at them again." So Sir Walter Scott sent the volumes to his gay old grand aunt. The next time he saw her she gave him back the volumes wrapped up with this remark: "Take back your bonny Mrs. Behn, and if you will take my advice, put her in the fire, for I found it impossible to get through the very first novel," but "is it not," she remarked, "a very odd thing that I, an old woman of 80 and upwards, sitting alone, feel ashamed to read a book which, 60 years ago, I have heard read aloud for the amusement of large circles, consisting of the first and most creditable society in London." Although Mrs. Behn contains much that is coarse in itself, it was written to suit a coarsely minded society.

The same viewpoint (as affected by the moral purpose) appears in the late eighteenth century, eulogies of Hogarth and Richardson. Dickens is affected by their spirit rather than that of Gay and the highwayman eulogists attempted their naturalism in "Oliver Twist." This met with such scurrillity from the "prunes and prisms mothers in Israel" that he made a very biting reply.¹⁵

The "Scarlet Letter" had an early apotheosis yet Flaubert's treatment of the same topic in "Madame Bovary" (which makes less apology for love out of marriage than Hawthorne) was prosecuted for immorality by the rotten court of Napoleon III, of whom John Hay¹⁶ sang

"The Frenchmen hate

But the Cockneys all admire."

The bourgeois like the Freudians, ignore all the psychologic moment except the supposedly existent. In every sane person as Ribot¹⁷ remarks, there is almost always one dominant thought which controls his conduct—the thought of pleasure, money, ambition, his soul's salvation and the like. This fixed idea, which persists through life, save where it is superseded by some other, finally becomes a fixed passion, which proves that attention and all its modes depend upon affective states. The transformation of attention into a fixed idea is still more clearly seen in great men. "What is a great life?" asks Alfred de la Vigne. "A thought of youth realized in mature years." If men in mass be observed—not persons of trained and cultivated minds, as psychologists almost always do—it will readily be seen that spontaneous, and above all, voluntary attention, are exceptional states. Eliminate first the routine of life—the vast mass of habits which makes us act like automatons, with vague and intermittent states of consciousness—eliminate those periods of our mental life in which we are passive, because the order and succession of our states of consciousness come from us from without and the series of states is imposed upon us in reading a book of average interest, or work manually or otherwise presupposing a succession of acts in a set order. Eliminate the state of relative repose wherein one is thinking of nothing at all—that is, wherein the states of consciousness have neither intensity nor clear definition—as reverie in all its degrees; eliminate states of passion and strong agitations with their irregular fluctuations and their diffusion of movement. These, and perhaps a few other states, eliminated, what remains may be credited to the general account of attention; and in this general account the cases of spontaneous attention constitute the great majority of the entries, while the clear and indisputable cases of voluntary attention are few: with many men they hardly amount to anything.

Ruskin,²⁰ despite his teleologn tendencies divided imagination into penetration, associative and contemplative, thus adopting Huxley's idea. The critics of the bourgeois type who, to quote Beaconsfield,²³ have failed in literature and art, display the egocentricities scarified by W. R. Patterson.²⁴ He (in reply to an appeal of "a Man of Letters" to put aside all fantastic and disordered imagination, boasting its self realism and return to the classics) remarks:

"If 'A Man of Letters,' equipped with his critical apparatus, had been a contemporary of Aeschylus and Sophocles, is it certain that he would not have rejected with horror the terrible subjects which those great men turned into plays? Could he have endured the situation created by Phaedra in the 'Hippolytus' of Euripides? That situation was recently reproduced in a London suburb, and we heard all about it in the divorce court. But if a modern novelist attempted to handle it, 'A Man of Letters' would probably cry, 'Fie! fie!'

"But it does seem as if all the novels and dramas, discreet and indiscreet, form nothing except the annals of Aphrodite. The climax, for instance, of the greatest poem of the modern era—Goethe's 'Faust'—is meaningless unless we know that at some point in the middle of the play innocence was transformed into guilt. The fact remains that it is love more as devil than as angel who holds the key of most of the great dramatic situations. 'A Man of Letters' bids novelists be guided by the ideal love, 'the star of Dante which leads up to highest heaven.' But it is really no longer possible to tolerate this nonsense which is talked about Dante and Beatrice. Disguise it as we may, the truth remains that Dante spent his most ardent years loving another man's wife. One wonders what Messer Simone dei Bardi would think of the great tenderness which all kinds of sentimental writers have displayed for Dante's obsession? Any one who has read 'Vita Nuova' knows that Dante was a man of gigantic passion, and that in his case, as in the cases of Byron and of Burns, it was love both balked and satisfied

which gave the real motive power. In 'Purgatorio' there are passages in which Dante, with a somewhat strange humility, causes Beatrice to chide him for having succumbed to a certain frailty. And as for 'fantastic and disordered imagination,' 'A Man of Letters' knows that the most astonishing instances are to be found in the work of the poet who made hell—and such a hell!—the foundation of his work."

Few literary men have encountered such scurrility from critics as E. A. Poe. By attempting to establish literary canons which did not kowtow to New England omniscience; a terrible sacrilege in a born Bostonian, he opened the still flowing flood gates of wrath. This deluge was the greater because from a logical analysis of himself²⁵ he described the abnormal as abnormal and not as the fashion or as occultly supernatural. Hypnotism to Poe, as to Mesmer, was a force allied to heat, light, electricity, etc., whence the name animal magnetism. Baudelaire, Poe's great introducer to Europe, said: "Poe's compositions seem created to prove how the weird enters into the beautiful." Here Poe carried out, but with even more attention to naturalism,²⁷ the canons Sir Walter Scott²⁶ lays down as to the use of the supernatural in fictitious composition.

"No realist of today of whom I have knowledge is capable of creating such a menagerie. So much for the classics. Dante, like another great realist, knew that 'the true physician walks the foulest ward.' But we must leave 'A Man of Letters' to sail away in his airship with the novels of Walter Scott. The war will go in Mansoul. But unless it is to be a sham fight the flesh must be allowed its combat with the spirit. John Bunyan knew all about it, and he was not afraid of speaking out. Realism and pathology? No great literature is without them. And how can it be otherwise if literature honestly interprets a world like ours?"

The literature of the late eighteenth and early nineteenth centuries was dominated by a psychological tendency which sometimes passed into a mysticism

resembling Rosicrucianism and sometimes explained (like Poe)²⁵ this mysticism.

Brockden Brown's *Wieland* is an illustration of the last and E. T. A. Hoffmann's²² of the first. Hoffmann, as Sir Walter Scott remarks, "led the way in this department of literature, the peculiarity of whose genius, temper and habits fitted him to distinguish himself where imagination was to be strained to the pitch of oddity and bizarrerie. He appears to have been a man of rare talent, a poet, artist and a musician, but unhappily of a hypochondriac and whimsical disposition which so carried him to extremes in all his undertakings that his music became capricious, his drawings caricatures and his tales, as he himself termed them, fantastic extravagances."

From a literary standpoint Hoffmann's tales approximate Poe, Hawthorne and Brockden Brown. Yet as will be seen from an analysis by Sir Walter Scott, one of Hoffmann's most characteristic tales (*The Sandman*) is destitute of the healthy human interest found alike in the "Fall of the House of Usher," "The Unpardonable Sin" and "Wieland." In order to write such a tale as "The Sandman" Hoffmann must have been deep in the mysteries of that fanciful artist (Callot) with whom he might certainly boast a kindred spirit. The narrative is

"Half horror and half whim

Like fiends in glee, ridiculously grim."

It is impossible to subject tales of this nature to criticism. They are not the vision of a poetical mind, they have scarcely even the seeming authenticity which the hallucinations of lunacy convey to the patient. They are the feverish dreams of a light-headed painter to which, though they may sometimes excite by their peculiarity or surprise by their oddity, we never feel disposed to yield more than momentary attention.

Brockden Brown's novels, according to E. P. Oberholtzer²⁸ drew their inspiration from the British tales of mystery by Horace Walpole and Mrs. Radcliffe. Brown had nearly completed five stories when "Wieland" appeared. "Ormond" followed *Wieland* along the same

lines. Then came *Arthur Mervyn* (a naturalistic story which had a peculiarly great topical interest from its depiction of the Philadelphia's yellow fever epidemic of 1793.) It was a best seller and had a popular triumph. The first part of this work was published in Philadelphia with the printer Maxwell. The manuscript was delivered as fast as it was written, and before Brown had yet determined his plot. . . . Brown's quill was busy from eight in the morning until eleven at night, and if he remembered the names of his characters in his various novels as each progressed under his hand and he moved from one to another, it was a fortunate circumstance.

"*'Edgar Huntley,'* his somnambulistic story, followed *'Arthur Mervyn.'* Then came *'Clara Howard.'* Here are five works of fiction, all of which appeared inside of three years; three were issued in one year. All were written before Brown was thirty. With a sixth story, *'Jane Talbot,'* (published in London in 1804, appearing soon after in Philadelphia,) Brown's literary career ends.

"These books are the work of a writer of unbridled imagination. In a few pages there are exciting incidents enough to serve a novelist of this day for an entire volume. Lust, intrigue, and multiplied mystery testify to a fancy as fecund as that of Schezcrade.

"Marvelous houses with winding stairways and dark basements, dead men who come to life in closets, lights that strangely disappear, treasure found and lost, with much seduction, suicide, and murder, make up a record which contains suggestions for a generation of story-writers. The reader is carried headlong from one startling situation to another until he is mentally fagged. . . .

"*'Wieland'* errs principally through the devices employed to create the tissue of mystery of which the tale consists. Two ideas are utilized, the principle of *'self-combustion'* by which the elder Wieland, the German mystic who has a temple of prayer somewhere on the banks of the Wissahickon or Schuylkill, is consumed; and ventriloquism, an art then new, by which a man for

no sufficient motive induces the younger Wieland to murder his wife and children.

"The great defect of 'Arthur Mervyn,' on the other hand, is the introduction of episodes that are forgotten by the author in the later development of his plot. In the end he has two interesting heroines whose fate remains to be explained. They are suddenly abandoned for a third. It is plain that the author changed his plans again and again as his work progressed under his hand. These faults arose from the fact that the printer literally stood at his shoulder while he wrote, after 'Wieland' had whetted the public taste for his stories, and the manuscript could not be revised. Such speed was fatal to art, as it was to Brown himself.

" 'Wieland' is an absorbing tale of mystery, while 'Arthur Mervyn' is more—it is in its first part a historical document ranking with Dr. Rush and Mathew Carey as a truthful delineation of the peculiar horrors of the yellow-fever plague of 1793 in Philadelphia. Of the scene between Welbeck and Mervyn, when the latter burns up \$20,000 in notes, Brown subsequently wrote that 'to excite and baffle curiosity without shocking belief is the end to be contemplated. I have endeavored to wind up the reader's passions to the highest pitch and to make the catastrophe in the highest degree unexpected and momentous.' "

West Jersey (the home of the "Kalynaks" the defective rivals of the Jukes) has defectives in "Arthur Mervyn." Brown still sells largely in cheap department store editions. Hoffmann's tales formed the basis of an opera in the late fifties and sixties. Fitzjames O'Brien's tales of mystery were in great vogue. He is less occultly supernatural than Hoffmann but much more than Poe. The occultly supernatural appears in Conan Doyle²⁹ who used the theosophy, esoteric Buddhism and Egyptian mysticism common to the very bourgeois British general practitioner; part of their special pleading for practice.

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1. Emerson Poems, Nature, 1836.
 2. Emerson Essays, Art.
 3. The Imaginative Man.
 4. Taboo and the Perils of the Soul.
 5. Scott: Demonology and Witchcraft.
 6. "In the Clay."
 7. English Review, 1909.
 8. History, Volume I.
 9. Literary Digest, 1910.
 10. Women of the Renaissance.
 11. English Review, 1909.
 12. What is Art? Camelot Classics.
 13. English Review, 1909.
 14. McDermott vs. McDermott.
 15. Preface to Second Edition of "Oliver Twist."
 16. Medical Psychology.
 17. Life of Macaulay.
 18. The Will and Attention.
 19. Essays.
 20. Modern Painters.
 22. Tales of Hoffmann.
 23. Lothair.
 24. Literary Digest, Nov., 1907.
 25. Imp of the Perverse.
 26. Essays.
 27. Tales of the Arabesque.
 28. Literary Digest, 1910.
 29. Round the Red Lamp.

TO BE CONTINUED.

NOTES ON THE HISTORY OF PSYCHIATRY. XII.*

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IN the issue of the *Alienist and Neurologist* for Feb. 1910, I started this series of notes. I there called attention to the historical sources, and stated that my purpose in presenting them was to offer to others some of the material upon which I hoped some day to construct a history of psychiatry.

They have been put forth in a desultory fashion, as the material became available, or as it happened to be in fairly presentable form for publication. They were to consist largely of literal translations, jottings and comments.

They have not followed any consistent plan and if I at present comment upon this fact it is because I recognize the helter-skelter character of the collection and only excuse their publication on the ground that the material, made available to those who are unable to get at the originals, may prove of some interest and value.

In this same issue of Feb., 1910, I began a translation of Friederich's masterly *History of Psychiatry*, which although published in 1830, has had no more worthy successor. I began with its second chapter, since the series of studies I then had ready were upon the early Greek and Roman psychiatrists. In this communication I shall go back to Friedrich's opening chapter, which logically should have preceded that beginning p. 3, Feb., 1910, of the *Alienist and Neurologist*.

* Continued from Nov., 1915.

CHAPTER I

EARLIEST HISTORY†

Although the earliest history has preserved nothing definite or systematic on the morbid life of the soul and its treatment, yet it affords us sporadic data which it is the duty of the historian to collect and preserve.

The sagas and traditions of the Jews and Egyptians are so indefinite and so unauthentic that they can well be passed over, and I shall turn at once to the documents of the Hebrews and to the myths and traditions handed down from Greece; from which it appears that several psychic diseases, e.g. melancholia, raving (Tobsucht) and the method of treatment were known in those times. But we perceive at once how the poor human spirit could not explain the surprising appearances of that form of suffering, and always found it necessary to ascribe it to the influences of a Daemon or an angry divinity from whom alone he expected help in such desperate conditions. Was it childish prejudice or stupidity, superstition and priestly deceit? I incline towards the first view, for deceit belongs later in a time marked by moral degeneration. The childishness of the human spirit, says Heinroth,¹ is expressed here in a striking manner. The fancy of the child taking every actual thing poetically and everything natural in relation to a supernatural is active in the judgments and mode of procedure of the ancient peoples. The phenomena of a diseased spirit were not human and coming from the man himself, but produced by and only to be removed by propitiation of the angered powers.

SEC. I

The documents of the Hebrews provide us two noteworthy and appropriate histories of two insane kings. Saul presents us a picture of a psychic disease² consisting of melancholia and mania (Wuth). The spirit of the Lord, i. e.,³ deserted Saul and an evil spirit made him very restless. "And Saul's servants said unto him: 'Behold now, an evil spirit from God troubleth thee. Let our Lord now command thy servants. . . . to seek

out a man who is a cunning player on a harp so thou shalt be well. . . . Wherefore Saul sent messengers unto Jesse and said. . . . let David . . . stand before me. . . . When the spirit from God was upon Saul David took the harp and played with his hand; so Saul was refreshed, and was well and the evil spirit departed from him."⁴ (I Sam. 15-23.) Nebuchadnezzar, King of Babylon, who according to the story had, in punishment for his insolence, to wander as an animal for seven years among the beasts of the field, apparently points to a mental malady caused by leprosy, and which has much similarity to lycanthropy.⁵ He was driven from men, and did eat grass as oxen, and his body was wet with the dew of Heaven, till his hairs were grown like eagle's feathers and his nails like birds' claws." Dan. IV. 33. It is known that the disfiguration of hair and nails follows leprosy.

Besides, the writings of the Old Testament contain mention of several other insanities, at least of insane behavior.⁶

So a woman told David that her husband was a fool and saved thereby not only him but herself, for she became, because of this turn, the wife of David after her own husband's death. (I Sam. 25.) Nabal had roughly and humiliatingly refused David's request for food when he had come to Carmel for the sheepshearing. In order to mitigate David's impetuosity Nabal's wife Abigail said: "Let my Lord set not his heart against Nabal, the wicked man. For he is a fool and folly is with him."

More definite and going more into detail is the account of the pretended madness of David. This came on his first flight to King Achish of Gath, before whom he was, however, afraid for the head servants had notified their master of David's great importance in his own country. Consequently David pretended insanity in order to forestall this belief in his personal and political power, let his saliva dribble into his beard⁷ and painted the doors of his house. So Achish said: "Why have you

brought a mad man to my house? Have I not mad men enough?" I Sam. 21.

The 34th Psalm bears the title: "David, a song of thanksgiving for being saved from peril when he appeared insane before Abimelech⁸ who drove him away and he departed."

SEC. II

In the New Testament the narratives of the demoniacs⁹ must be more closely studied psychologically. These demoniacs' maladies were, as Carus (*Psy. of the Hebrews*, p. 436) thinks, not merely psychic diseases, nor yet mere bodily diseases, but both, although all could very well be connected with neurasthenias (*Geistesschwache*.) In general the Evangelists represent some as *Daimonizomenous* (demoniacs) in whom it is doubtful whether psychic disease plays any part; thus, for example, they spoke of demoniacs who were dumb,¹⁰ of others who were dumb and blind,¹¹ and again of others who were epileptics.¹² One can readily assume here that these phenomena were concomitants (*Nebensymptome*) or *sequelae* of an actual insanity; it is well known that epilepsy and mental suffering appear closely united. Of the damsel possessed with a spirit of divination who is mentioned in the Acts, Carus¹³ thinks it is not clear whether she was an exalted visionary with periodic insanity, or a cunning deceiver who was used by her masters as a tool against Paul. In another place (Acts, XIX, 13-17) is found evidence of the great physical strength of the insane. Seven sons of a high priest wished to be exorcists, but the demoniac attacked them all seven with his customary maniacal strength and overpowered and wounded them. As in the already mentioned cases a psychic trouble is clearly indicated¹⁴ in the demoniacs in the land of the Gadarcnes, and Matthew (VII 28ff), Mark (V 1 ff) and Luke (VIII 26 ff) tell of it. Matthew speaks of two demoniacs; Mark and Luke of only one. According to Sprengel¹⁵ the significance of these stories is that the mentally diseased people whom Christ healed psychically by influencing their imagination, by arousing their belief,

etc., previously assumed a swinish behavior or swinish morals, or possibly as they were probably swineherds, they had imagined that they were swine, just as the Areadian herdsmen, if they became melancholic, imagined they were wolves, on which we shall have something to say in See. IV. In this interpretation I can not, however, concur. But it is certain that the mental malady of these demoniacs has an evident likeness to lycanthropy; for all three Evangelists mention the peculiar symptom of wandering around and searching tombs, and it is also a symptom of lycanthropy above all other mental disturbances.¹⁶ However, these stories have occasioned many strange interpretations. In the Evangelists¹⁷ it is said that the devils, after being driven out of the demoniacs, ran into a herd of swine and later threw themselves into the sea. Osiander, if I understand him rightly,¹⁸ seems to assume a suicidal impulse in these swine, produced by pain, according to which they drowned themselves, while he assumes also that animals impelled to suicide by pain or weariness of life chose death by drowning.¹⁹ Gruner, in a polemical essay²⁰ explains every suicide as either insane or mad, and as Baldinger²¹ maintains, suicide always presupposes sanity, as no pig has ever blown his brains out, so Gruner humorously retorts: "Hogs do not get drunk, like tipplers, and are not practiced in the management of firearms. To be sure they come to camp, not as army physicians, but under compulsion and destined for death, and when they die, it is the death of their (Gegesinnischen) brothers and sisters and so not a suicide."

The proper explanation of this story is as follows, according to Paulus²² and Carus.²³ One²⁴ demoniac (Rasender) resorted, in his melancholic shunning of men, to graves and deserted places. He was strong and often relapsed into the wildest paroxysms. If he was put in irons no one could keep him at home. When he had his paroxysms, he tore himself free and raged in the lonely desert with outcries and madness at himself, so that he bruised himself with stones. In addition he had the

fixed idea that his personality was estranged and belonged to the demons. At the same time also he was in one of those desert places which were left for graves and pastures for swine. The landing of several vessels in this vicinity must have astonished him. Doubtless in his lucid interval which had come to him, he asked some of the followers of Jesus what was going on, and heard that one of those disembarking was the Messiah, Jesus. This appearance or this rumor was magnified in his wild phantasy, and no wonder if it produced contradictory effects and a crisis. Not only is every madman generally at odds with himself, but this one must, on account of his obsession, have felt it doubly. On the one hand he must have desired and sought delivery from the demons, in so far as he was conscious of his obsession; on the other, he must have been afraid of having them driven out in so far as he regarded himself as the tool of the demons and felt their ascendancy. Both circumstances must have co-operated, although the latter was undoubtedly the stronger. His first sudden impulse showed itself in running up to the Messiah. But when he had come up with Him, and Jesus ordered the demon to depart, he felt himself overpowered by the demon, lost himself and identified himself with the demon, and talked as if it spoke itself, prayed for mercy or besought not to be driven out of his obsession that had become dear to him. In order to make on a demoniac a surer effect and a permanent result, the physician has to enquire about the fixed ideas that he has conceived and treat him accordingly. So also Jesus begins His treatment of this unfortunate by the inquiry into his individuality and asks him: "What is thy name?" and apparently expected to hear the name of the invalid and then to begin a further conversation revealing his circumstances. "Legion" is the unexpected answer; for in his strong feeling of dependence on the demons and of the crowd of demons dwelling in him, the invalid took Jesus' question as a question to the demons that were haunting him. He answered in the role of these demons, and expressed in his answer what

he must have heard in his paroxysms in the struggle with those that meant to subdue him. In him a legion of devils must have dwelt. In the confusion, in which the invalid and the demons changed places, there arose in him the fantastic conceit or the memory of a popular idea that demons would rather become weak if they had not to go straight to hell. The addition that he also made to his answer in the form of an entreaty that Jesus should yet permit the demons to go into the swine that were pasturing there was, for one who knew human nature, as Jesus did, a valuable indication, by which the means of curing him could be furthered, for Jesus noticed in the invalid the idea that the demons would easily lose power, if they only had to go to hell, and that he would be relieved of their farther pursuit of him, if they passed from his body into the animals' bodies, i. e., into the swine just then appearing. His Jewish hatred of swine could easily create in him the thought that there was no more suitable dwelling for such tormenting spirits than a pig's body. This insane fixed conceit must be regarded by Jesus if He desired to get complete control of him.²⁵ Yet as he did not easily yield, the demoniac ran behind the feeding swine and no one opposed this outbreak of his hatred because it had long been considered unconquerable. They were afraid of the wild runner; the general attention on 2000 fleeing swine, the running away of the herdsmen produced in him the most intense agitation and all the quicker the repose and—with the belief in the true Savior—the immediate return of his senses. He soon clothed himself and stayed close to his Savior Jesus. Jesus knew how to deliver him and to care for his recovery. He advised him to go home to his people apparently to work there; he advised him (a thing Jesus does not elsewhere do) to relate the occurrence to the whole city, for the more the man himself told about his recovery, the more certain and permanent must it remain for him, for he convinced himself all the more of it, and the self-determination to be cured is in

all psychic diseases a necessary requisite for the permanence of a complete recovery.

The following I know only by title:

Petri, Pr. On the History of two Gadarene Demoniacs, Erfurt, 1797.

SEC. III

Concerning the Greek myths, the Homeric poems are of great importance, although much more can be drawn from them about anthropology as Halbkart²⁶ has amply shown, than about mental maladies.

As an example of dejection and melancholia Homer shows us Bellerophon hated by the gods:

"But when even Bellerophon came to be hated of all the gods, then wandered he alone in the Aleian plain, devouring his own soul and avoiding the paths of men." Lang, Leaf and Myers' translation. Iliad VI, 200.

In the Odyssey Homer praises the means of banishing all trouble that Helen brought with her from Egypt:

"Then Helen, daughter of Zeus, turned to new thoughts. Presently she cast a drug into the wine whereof they drank, a drug to lull all pain and anger, and bring forgetfulness of every sorrow. Whoso should drink a draft thereof when it is mingled in the bowl, on that day he would let no tear fall down his cheeks, not though his mother and his father died, not though men slew his brother or dear son with the sword before his face, and his own eyes beheld it." Odyssey, IV, 219, Butcher and Lang translation.

Domeier²⁷ thinks it is a kind of opium, as the poet calls it *Nependes* (care free). Sprengel²⁸ also considers it poppy juice.

Did Homer know the psychic significance of narcotics? The following passage shows that he knew the poppy:

"Even as in a garden a poppy droopeth its head aside, being heavy with fruit and the showers of spring; so bowed he aside his head laden with his helm." Iliad, VIII, 306, Lang, Leaf and Myers.

The story that Orpheus saved²⁹ Eurydice from Persephone by the power of his lyre may be regarded

as proof of the power of music in general and that of Orpheus in particular, but it is impossible to tell from this myth whether this story, as Heinroth³⁰ thinks, means that melancholia may be cured by music. Eurydice while fleeing from the power of Aristaeus, was bitten by a snake and died. Orpheus saved her from Persephone's power and from the realm of shades, but not from the bonds of dependency.

Further examples of madness (Wuth) in antiquity are Hercules and Ajax; of delirium, which the Furies arouse (with epilepsy), Orestes, Athamas and Alcmaon.³¹

Chiarugi finds in the history of Orestes a proof that violent passions are able to cure developed psychic diseases, and he explains this story in accordance with that idea. As Orestes wanted to avenge his father's death with the blood of his own mother, Clytemnestra, so he fell into the delusion of always seeing the shade of his mother, armed with torches and serpents; he asked advice of the Oracle, and undertook, in this morbid mental state, a sea voyage with his friend Pylades. When he landed in the Chersonese, a sudden terror seized him while he was in danger of being sacrificed to the gods of the country. He escaped death, however, and was transported with great and unexpected joy when he recognized in his liberator his sister Iphigenia. He then returned to Greece in full possession of his reason.

SEC. IV

Three important topics relating to our subject have been treated historically by antiquity: Lycanthropy, the madness of Proetus' daughters and the madness of the Scythians.

On the earliest trace of the wolf-madness (lycanthropy) in Greek mythology the learned Böttiger has written in Sprengel's Contributions to the History of Medicine³² an interesting essay, the chief points of which I will here present.

The earliest animal metamorphosis mentioned in antiquity and antedating Ovid is the transformation

of the Arcadian king Lycaon into a wolf. And here Böttiger believes that in this Arcadian origin we meet the earliest trace of lycanthropy, clothed though it be in so many traditions and fables. The story of Lycaon is told in different forms. According to Ovid (*Metam.* I, 214) Zeus comes in the guise of a poor man to Lycaon who places cooked human flesh before him. Enraged at this transgression Zeus with his thunderbolt burns Lycaon's house and changes him into a hideous wolf. A different and earlier tradition is related in Apollodorus (*III*, 811.) Here Lycaon only shares the fate of a degenerate son who set before the disguised Zeus some beef with bits of a slain man, and was with the son immediately struck by lightning. Another form of this tradition has Lycaon with all his sons except Nyktimus changed into wolves. However much these tales differ they all end with a change into a wolf.

The explanations of this wolf metamorphosis are various. Lenz³³ says that the change of an irreverent and murderous man into a wolf shows the ethical design of this fable to warn brutal men against violence and to respect the gods. Mellmann³⁴ also is unwilling to deny the moral tendency of this fable and reminds us that the story could have been developed partly from the name Lycaon (*lyk*=wolf).

Schneider has an hypothesis that the animal transformations are used by priests and poets as a concrete means of expressing the Pythagorean metempsychosis, and would have them understood as a warning against gross immorality. He finds in this old myth where the spirit of a murderer and violator of the sacred rights of guests is transplanted into a ravening wolf—a new confirmation of his explanation.³⁵ Let us turn now to Böttiger's conception. How, says he,³⁶ if this Lycaon, whose origin, posterity and genealogical table is so doubtful,³⁷ is to represent only a personified peculiarity of the earliest inhabitants of Arcadia, could a variety of insanity easily developed in an isolated, half-savage herdsman's life, with bad food and an unhealthy climate, become at once

epidemic? How, if the so-called lycanthropy was almost hereditary in some families, since they called such people Lycaonas (Lycaons) was the national myth transferred to an old king who was so named? But he asks further (p. 19) how did it happen that even in Arcadia so many traces are found from the remotest antiquity of a disease of which the rest of the Greeks apparently knew little or nothing? He finds the solution in the following facts:

The Arcadians considered themselves as one part of the Pelasgians who were the oldest inhabitants of Greece, unmixed for the longest period in their inland and forest country, and without the advantages of that foreign culture and refinement which the rest of Greece, with its hundred coasts, bays and islands, so gladly, so early and so successfully took from foreign colonists that poured in from Asia Minor, Phoenicia and Egypt.³⁸ In the oldest Arcadian folklore is found therefore the earliest history of all the original inhabitants of Greece.³⁹ Furthermore Arcadia was a land full of forests, swamps and pastures⁴⁰ and the inhabitants were herdsmen who had to fight unceasingly with the beasts of prey of Maenalus, Erymanthus, Cyllene, etc. The climate and the soils were harsh and unfriendly, the food coarse and indigestible, the religious conceptions puerile, unrefined and interwoven with the ideas of magic, witchcraft, and sorcery. Among hunters and shepherds even today the grossest superstition is prevalent and while explanation of natural phenomena and psychical healing powers are themselves therefore at the lowest level, there remain with this class of men deeply rooted prejudices and beliefs in sympathetic cures, ghosts, apparitions and magic. From all these circumstances it must be evident that so coarse a herdsman and hunter people as the Pelasgians in Arcadia were, presupposing their climate and manner of living, very susceptible to this form of insanity, denoted by the name lycanthropy. Besides, the susceptibility to sudden impressions of terror and an insane dread of ghosts among the Arcadian herdsmen aroused originally the peculiar concept of the panic fear,⁴¹ nocturnal dis-

turbances in the forests and strongholds and the unexplainable stampedes of whole herds in bright midday.⁴² Such are the results of Böttiger's researches, according to whom the imagination and fantasy of the Arcadians partly from superstition, partly from fear of wolves which threatened the herds, the only riches of this people, was so inflamed and was so constantly abnormally stirred up, that it could easily have developed the permanent delusion (Wahn) of itself being a wolf.^{43 44}

MONOGRAPHS ON LYCANTHROPY

GOLDNER: Diss. on the Nonexistence (Nullitas) of Lycanthropy, Witteb. 1664.

MEI: Diss: Lycanthropia, which some in Livonia relate as having truly occurred about the time of the birth of the Lord, is quite false. Witteb. 1650.

DE NYAND: On Lycanthropy, Paris, 1615.

NIFANIUS: Diss. on the Imaginary (Disease) Lycanthropy, Giessen, 1664.

MULLER: Diss. on Lycanthropy, or Transmutation of Men Into Wolves, Leipzig, 1673.

SALZMANN: On Lycanthropy, Argent. 1649.

SALZMANN: On Mania and its Forms, Lycanthropy and Hydrophobia, Argent. 1619.

WOLFESHUSIUS: On Lycanthropes; A Philosophical Problem, Leipzig, 1591.

WOLFIUS: Diss. On the Wolf and on Lycanthropy, Witteb. 1666.

SEC. V

II. Melampus, son⁴⁵ of Amythaon and Aglaia, who was highly renowned⁴⁶ in ancient Greece for his medical art, was known chiefly for his cure of the daughters of Proetus. Herodotus, (Book IX, Chap. 23) relates that Melampus had when a herdsman observed that the she-goats, after eating hellebore (*veratrum album*) always had a soft defecation. When Proetus' daughters were attacked by madness, he had used⁴⁷ this remedy on them with the best results, whereupon the king gave him one of his daughters and a third of his kingdom.⁴⁸ The following account of the illness of Proetus' daughters is found

in the historical documents of the ancients.⁴⁹ Apollodorus,⁵⁰ on the authority of Akusilaus, says that the daughters of Proetus, whom he calls Lysippe, Iphinoe and Iphianassa, were insane because they had slighted the statue of Here. The meaning of this myth is that they became insane because they scorned marriage which is sacred to Here. They wandered about in the wilderness, and acted like cows, etc.⁵¹ After they had wandered about a long time they were joined by several women from Tiryns and Argos, who had the same insane impulse (Spuck).⁵² Hesiod gives us in his Fragments⁵³ the most significant account of the sickness of Proetus' daughters from which it may reasonably be inferred that they suffered from a mental disturbance that was caused by leprosy. Eustathius, apropos of the line from the *Odyssey* XIII, 431, "Weak too, became their dim eyes that formerly beamed so agreeably," in order to explain the word *Knyzein* (be dim) and to derive it from *Knyein* (scratch) quotes the following passage from Hesiod, bearing on the daughters of Proetus:

"On their heads came ugly itching scabs, for the whole skin was disfigured with freckly eruptions (*Linzenmal*=*lentigo*). They lost their hair, and their beautiful forms suffered from bald mole spots."

Here we find in the itching scalp or the lichens (*Knesmos*, *psora*=itching, mange) the freckly eruptions (*Alphos*=leprosy) and the bald mole spots, *Alopecia*. All these appearances are symptoms of white leprosy.⁵⁴ A frequent indication of this kind of leprosy is a psychic disturbance,⁵⁵ also the voice is affected, and resembles the barking of young dogs or the bleating of calves. The cure of Melampus consisted in giving Proetus' daughters hellebore⁵⁶ and, as Apollodorus⁵⁷ says, had them chased by vigorous youths with fanatical noises and exciting dances from the mountains to Sicyon.⁵⁸ This increased the perspiration, accelerated the deposit (*Absatz*) on the skin⁵⁹ and so helped to cure. And as Sprengel well observes,⁶⁰ if in this treatment the lusty youths wanted to do their best to reconcile the poor maidens

with the goddess of marriage, they would not have had anything more to fear from the contagion leprosy, as a critical deposit (*Absatz*) on the skin followed, and also according to Moses' declaration, the maidens were clean.

NOTE

In the matter of the use of hellebore in insanity it may be not out of place to add a historico-literary note.

Veratrum album is our *Helleborus albus*, which was used by the ancients in insanity. Without going into any botanical researches, or into the disputed question as to whether the ancients used the black or white hellebore, etc., which is not pertinent here, and about which there is plenty to be found in the literature already cited, I will here touch only upon the therapeutics.

The ancient poets allude often to the methods of curing insanity with hellebore, and it is generally believed that hellebore possessed such specific virtues for the clearing up and strengthening of the reason, that it was frequently used for the strengthening of the understanding in men that busied themselves with learned or philosophical researches. In Horace we find several passages proving this statement; e. g., he says⁶¹ in order to express an extreme case of madness:

"A head incurable with three Anticyrae."⁶²

In another passage he says:

"Here, restored by the help and kind treatment of relatives, he drove out the disease and the bile with pure hellebore, and came to his senses, etc." *Epist.* II, v. 136.

In one of his satires where he elucidates the teachings of the Stoics that all not wise and virtuous is crazy appear the following passages. (*Sat.* 3, *Bk.* II., v. 82, 165.)

To misers the strongest dose of hellebore should be given.

I do not know whether reason destines the whole of Anticyra for them.

But let the ambitious and bold sail to Anticyra.

Persius⁶³ says, while advising Nero instead of taking upon himself the powerfully stimulating governmental business that develops discernment, to take good medicine that will clear up his understanding;

"Better to imbibe pure Anticyras."

Pliny⁶⁴ says: "For clearer discernment it is considered best to take hellebore rather frequently." Carneades took a preliminary dose of hellebore when he was going to write against the Stoic Zeno.⁶⁵ Valerius Maximus⁶⁶ tells the same story of (Carneades) that, when he was about to debate with Chrysippus, he purged himself with hellebore.

With respect to the cases of mental disease, in which the ancient physicians used hellebore, we shall have something to say in the following sections. A few words, however, on the form in which they gave this remedy.⁶⁷ They soaked the shavings of hellebore root in rain water and gave this water, which they called *Cremor hellebori* (hellebore soup.) Or they boiled the roots in water and added strained honey to the distillation. They also gave the root raw (in *Substanz*.) Sometimes they mixed (interlarded) radishes with the hellebore roots, steeped them in oxymel (sour honey) and gave them to the patients after the hellebore was taken out. There are still other ancient and modern preparations of this remedy; e. g., the Pills of Haly, the Syrup of King's Sapor (relish), the Oxymel Helleboratum Juliani and several others. The pills specially recommended by Haly against melancholia consisted, according to the accounts of the ancient writers, of the following mixture: 12 drams of *hiera picra*, of black hellebore and of *polypodium* full (?) (*Ana*) 5 drams, of *epithymum* and of *staechas* full 7 drams, of larch fungus 3 drams, of Armenian stone, of Indian salts (*salmiac*?) and of *coloquint* full 3 drams. The specially recommended Syrup of King's Sapor of the Arabs was hellebore cooked in honey to the consistency of syrup. The Oxymel Helleboratum Juliani contained both kinds of hellebore and wolf's milk.

If anyone desires to read further on the botanical, pharmaceutic and historical side I recommend the following:

ETTMÜLLER: Theoreticæ Praepractical Medical Works, Geneva, 1736, Vol. I, p. 760, Vol. II, p. 240; Vol. III, p. 385.

SCHULZE: Diss. on the Hellebores of the Ancients, Hal., 1717.

BUCHNER: Diss. on the Salutary and Noxious Hellebore and the use of its preparations. Hal., 1751.

LORRY: On Melancholia and Melancholic Diseases, Paris, 1765, Vol. II, p. 288.

MURRAY: Apparatus Medicaminum, Gott. 1790, Vol. V, p. 149.

HAHNEMANN: Diss. on the Helleborism of the Ancients, Leipzig, 1812, (Med. chir. Zeit. Ergänzungsband, XIX, p. 334.)

KERR: Medical Sketches on the Following Subjects: (1) On the Use of Hellebore as a Remedy for Insanity, Lond., 1818.

SONNTAG: Diss. on the Hellebore of the Ancients, with an appendix on the use of white hellebore by later physicians), Jena, 1822.

THEOPHRASTUS: Natural History of Plants, trans. and elucidated by K. Sprengel, Part II, p. 366. Altona, 1822.

DIERBACH: The Medicine of Hippocrates, Heidelb. 1824, p. 107.

SEC. VI

III. The disease of the Scythians⁶⁸ was subjected by the writers to various interpretations. Herodotus⁶⁹ relates that the Seythians, in their march through Asia, had come to Askalon in Palestine and had there ravaged the temple of Aphrodite. As a punishment the goddess had sent them a feminine disease (Theleia nosos, female disease). Hippocrates⁷⁰ had already mentioned this disease. He says: "There are many impotents among the Seythians, who act like women, have a feminine voice and are called unmanly (Anandries, un-

manned). The natives ascribe the cause to the divinity. They honor these persons and almost idolize them, for everyone fears a similar misfortune for himself." Mercurialis⁷¹ compares the two accounts but contributes nothing to the elucidation of the disease. Bouhier⁷² considers them inconsistent, and believes that they are speaking of two different diseases; but otherwise gives no better information.

Hippocrates⁷³ tells the following story of the disease: "From continual riding they get swellings in the hip joints, they begin to limp and the swellings break. They cure themselves in the following manner. As soon as the disease breaks out they open a vein behind the ear. When the blood comes, they fall into a deep sleep from weakness. They are then waked up and some are well and others not. Those that afterward desire coition and can accomplish nothing, arouse no suspicion at first but are still and quiet. After it has gone thus with similar attempts three or four times, they believe that they have sinned against the divinity whom they consider the efficient cause of this evil. They declare themselves impotent, assume feminine clothing and manners and perform feminine duties."

Other writers seek the cause of this illness in pederasty, in hemorrhoids, in syphilis⁷⁴ in the whites,⁷⁵ etc. I believe I may ascribe the cause of this disease to a mental disease on the following grounds:

1. According to the ancient accounts this disease was found principally among the Scythian magicians and priests who by the constant psychical exaltation in which they found themselves by virtue of their profession were particularly subject to mental disturbances. Their bodies were so sensitive they fell into the most awful convulsions as often as they desired or the superstition of the people made it necessary. If we take into account also the circumstance that these priests renounced voluntarily intercourse with the female sex, and weakened themselves by their continual excitement to such a degree that they were quite incapable of an actual coition,

whence they were called by the Greeks unmanned (*Enarees*, women men, *Anandries*, impotent persons), then the supposition seems not hazardous that in this case a morbid mental condition was the original from which first the physical trouble, i. e., impotence, may be regarded as resulting.⁷⁶ If these people reflected upon their own troubles, and pondered on them in quieter moments, the transition to mental disease with fixed delusion very easily results: "forever to have to be impotent, to have to become a woman and to behave like a woman in clothing, occupation, etc."

That may be the explanation of the disease of the priests and magicians, it may be objected, but why is it found among other Scythians not belonging to these castes? In this connection I may venture the following supposition: Apparently the disease developed originally among the priests and magicians, and spread from them over the entire people. That mental diseases often spread with wonderful quickness among coarse, uncultivated peoples (like a psychic contagion, if I may use the expression)⁷⁷ is an established fact. An additional circumstance is that the people find a certain normal type in the actions and behavior of their priests and superiors that exercise a continual control over them and strives to imitate the ridiculous and senseless as well as the good.

2. The fixed delusion of being a woman is not an uncommon psychical disease, and is observed everywhere. The Jesuits, Dorville and Gruber, saw men in women's clothing in the court of the King of Tangut,⁷⁸ and it is a question whether they were deranged, or kept at court for amusement or other purposes. The navigators, Narvaez, Rivault and Laudonniere found in Florida several masculine individuals who wore women's clothing and did women's work.

Gmelin found in Tomsk in Siberia an old man who looked like a woman and behaved like one.⁷⁹ Schaefer saw in the Bicetre at Paris a lunatic in woman's clothing and with a long beard. He had been 20 years in the

institution and believed he was a woman. If he was addressed as madame, he answered modestly; but if he was called monsieur, he was angry and speechless.⁸⁰

3. Hippocrates says expressly in the already quoted passage that these diseased Scythians were held in great honor and worshipped. Now there is not a trace in antiquity, as far as I know, that such honors were paid to physical diseases. But it was quite customary with the ancients, especially in rude nations, that had maintained themselves till recent times, to honor mental diseases and even consider them sacred.⁸¹

Eusebius⁸² tells of insane priests in Egypt, who like the unmanned persons of the Scythians, were honored. The crazy beggar, Labre, was considered holy and canonized⁸³ after his death. The cretins in whom mental disease plays the chief part are regarded as holy in the country near Sitten. In some regions of the Alps, as some travelers narrate, the inhabitants are glad to see their children in this idiotic condition, and consider them as guardian spirits of their houses.⁸⁴

4. Finally the already quoted descriptions of the writers are not sufficient, as causes of these diseases, to be taken as furnishing a correct picture of any one of the forms of physical sickness. The excessive riding of the Scythians which Hippocrates supposes to be the cause, is not adequate, and the insight of the other writers is so slight, and their statements so contradictory, that one can surely suspect that were it so simple and easily understood a physical trouble as Hippocrates and his imitators suppose, it would not be mistaken and described so differently. The occurrence of any form of psychic illness, on the other hand, in those times when the doctrines of the soul lacked so much explanation, was always a riddle. Their explanation was either incomplete, hazy and contradictory, or, in order to be excused from all further troublesome investigation, they ascribed the origin of it to the influence of some angry divinity, as was indeed the case in the female disease of the Scythians.

I realize that this position of mine is not strong; only it carries greater weight in connection with the other three.

LITERATURE ON THE SCYTHIAN DISEASE

NEBEL: *On Obscure Diseases of the Ancients*, Giess., 1794. Sect. I. (He considers the disease only a male impotence that the wealthy Scythians had contracted on account of their licentiousness.)

GRAFF: *The Female Disease of the Scythians*. Diss. Wirceb. (This is indeed carefully elaborated historically. But it regards the disease only somatically. The appended history of diseases is only loosely connected with the Scythian disease and affords only a description of an arrested development of the sexual system.)

STARK: *On the Female Disease mentioned by Herodotus*, Jena, 1827. (The author gives an extended resume of the opinions of different ancient writers on this disease, and shows that it was connected with a complete loss of virility, both physical and mental. He collects also many observations of physicians and travelers, which illuminate the anomalies between the structure of the sexual system and the other psychic and physical conditions. Accordingly he tries to prove that the female disease of the Scythians consisted of such a transformation of the psychic and physical character of the man into the womanly nature. The second part of this essay analyses the nature and origin of this disease according to Hippocrates and the later writers.)

HEYNE: *On Males among the Scythians made Effeminate by Disease*: in the *Comment. of the Gottingen Soc.*, 1778, *Class. Philog.* Vol. I, p. 28. (Heyne believes that the disease consisted in a melancholic or hypochondriac derangement of the understanding connected with an abnormal weakness and impotence which had made the men like women.)

PETIT: *On Amazons*, Paris, 1685. (This contains several mentions of the Scythian disease. I can form no opinion as I have not seen the book.)

NOTE

It may not be superfluous here, in order to obviate any mistakes and confusion, to remark that, in the most ancient and in later times, different diseases have been called the female disease. Thus, for instance, Bosius⁸⁵ says that the expression "Theleia Nousos," first found in Herodotus, was used to denote other diseases, especially those caused by an effeminate sensual life.⁸⁶

In Hensler,⁸⁷ we read: "No matter what illness a wench may suffer,⁸⁸ she is called a leaky hussy (flusshafter Weibsbilder) (Rhoica, weak), and the disease is called the woman's disease. Men who suffer from a copious flow of semen prematurely, suffer the same, says Benedetti, as the women with flux. And in common life, outside of the medical schools the ideas and names are naturally unintelligible. Beroaldus, who is no physician, also calls the disease the female disease, the men that were affected with it, the Gomorrhites of his time, he calls "leaky hussies."

SEC. VII

In closing this chapter I will mention two more ancient historians, viz. Polybius and Aelianus, who tell something of interest to us.

Polybius⁸⁹ extols as a wise institution of the law-giver of Arcadia, that it recommended music to the citizens that showed themselves to be subject to melancholia and moroseness.⁹⁰

Claudius Aelianus⁹¹ tells of the insanity of Thrasyllus Aixoneus. When he left the city and went to the Piraeus (a harbor of Athens) and took up his abode there, he considered all the ships that came in as his property, named them and sent them away again, rejoiced over those that safely arrived and were moored in the harbor. His derangement lasted a long time; until his brother came from Sicily and handed him over to a physician for treatment, who fortunately cured him.

Thrasyllus still remembered his insanity and gave assurance that he would never again be satisfied in that

manner, i. e., in that delusion where he thought that the incoming ships were his property.

Just as happy and satisfied in his fixed ideas was that lunatic of whom Horace says:

"He was not unknown to the Greeks

Who believed that he was listening to marvellous tragedies,

A joyful spectator and applauder in an empty theatre,

A man who righteously performed all other duties of life;

A good neighbor, in sooth, an amiable host;

Kind to his wife, and could forgive his slaves,

And not rage when the seal on his bottle was broken,

Could avoid a cliff or an open well,

When he was restored by the resourceful treatment of his kinsmen,

And he drove forth the disease, and the bile with pure hellebore

And returned to his senses, 'Heavens,' said he, 'you have killed me, friends,

Not saved me'; for his pleasure was torn from him

And his delightful mistake was forced from him."

† Versuch einer Literargeschichte der Pathologie und Therapie der psychischen Krankheiten, J. B. Friederich, 1830.

1. Lehrbuch der Störungen des Seelenlebens, Leipzig, 1818, Part I, Sec. 95.

2. On Saul's malady, compare Loescher. Dissertation on Saul's cure by Music, Witteb., 1688; Wedel diss. on Saul's Madness, Jena, 1685; Schreger's *Medicohermeneutic Researches on History of Invalids in the Bible*, Leipzig, 1794, p. 74; Carus, *Psych. of the Hebrews*, Leipzig, 1809, p. 420; Richard Mead, (*Holy Medicine or on the more remarkable diseases that are mentioned in the Bible*, Lond., 1749, Chap. III) says: "It is clear to me, that the disease of this king was true insanity, of that variety which consists of sadness, and which the ancient physicians said was caused by black bile.

3. I Sam. 16., K. Forkel, *General History of Music*, Leipzig, 1783; Vol. I, p. 112; Josephus, *Antiquities of the Jews*, Book IV, Chap. 8; Jahn, *Biblical Archaeology*, Part I, 2B. Vienna, 1818, Sec. 224. Saaf-Schutz, *History and Place of Music among the Hebrews*, Berlin, 1829, p. 16.

4. In a similar way Chas. IX of France was apparently freed of his nocturnal restlessness caused by his conscience on remembering the bloody wedding. Cp. Thuan Hist. Bk. LVII, p. 1291.

5. The strange ideas of ancient writers on Nebuchadnezzar's malady are seen in Reinhard, *Bible Diseases*, Frankfort, 1767, Book IV., Chap. 2, and in Calmet, *Dissert. on Nebuchadnezzar's Metamorphosis in Calmet's Dissert. on Old and New Testament*, ed. Mansi, Wireeb., 1789, Vol. II, p. 457. Reinhard thinks it is lycanthropy, also

Mead, *Holy Medicine*, Lond., 1749, Chap. VII. Several foolish, unpsychological explanations are given by Calmet, *Dict. of the Bible*, Art. *Nehuchadnezzar*. That *Nehuchadnezzar* already had a disposition to insanity (*Wahnsinn*) is proved by the fact that he was annoyed by visions and thought he heard voices. So he believed, when he was on the Tower of Babel, that he heard a voice from Heaven, that announced the removal and expulsion of mankind, etc. This was the first symptom of his later fully developed psychic malady. Cp. also Jahn, l. c., p. 400. Timmermann on the *Demoniacs of the Gospels*, Rintel., 1786, pp. 38, 39.

6. Carus, *Psy. of the Hebrews*, p. 430.
7. Cp. Chandler, *Critical Biography of David*, trans. from English by Diederichs, Bremen & Leipzig, Part I., 1777, p. 111.

8. The common name of all Philistine Kings.

9. The best of all the hooks and the one that is notable for the great number of historic and literary notes, is Th. G. Timmermann, *Discussion, archaeological and medical, on the demoniacs of the Gospels*, Rintel., 1786.

10. Matt., IX, 32.

11. Matt., XII, 22.

12. Matt. XVII, 14; Mark, IX, 19; Luke, IX, 39.

13. L. c., P. 438, 439.

14. Even in an old work of Ader (*Accounts of Invalids and Diseases in the Gospels*, Toulouse, 1620) the disease of the raving was called *Mania Hypochondriaca*.

15. *Contributions to the History of Med.*, Bk. I, pt. 2, p. 60.

16. So Matthew: "And when he was come to the other side into the country of the *Gergesenes*, there met him, etc. (two possessed of devils, coming out of the tombs, exceeding fierce, so that no man might pass by that way.)"

Mark: "And when he was come out of the ship, immediately there met him out of the tombs a man with an unclean spirit, who had his dwelling among the tombs, etc."

Luke: "And when he went forth to the land, there met him out of the city a certain man, which had devils long time, and wore no clothes, neither abode in any house hut in the tombs, etc."

17. Matt., VIII, 31, 32; Mark, V, 12, 13; Luke, VIII, 32, 33.

18. On Suicide, Hanover, 1813, p. 127.

19. He relates as proof of his statement in the *N. Hanover Magazine*, 1808, p. 87, the following example: A dog that was run over and had lost the use of his hind legs suffered greatly, as no one would kill him. So the dog, apparently overpowered by his agonies, crept howling to a river, swallowed a lot of water and finally sank and was drowned.

20. Gruner and Streihard, *Diss. on Signs of Suicide*, Jena, 1793.

21. In his *Med. and Physiolog. Journal*, No. 30, p. 82.

22. *Commentary on the New Testament*, 2d. ed., Lubeck, 1804, Part I, p. 482.

23. *Psychology of the Hebrews*, p. 439.

24. We can assume only one demoniac and not two as Matthew says. For demoniacs do not go in company, least of all if one is so raving and repellant as the one in question.

25. Calmet (*Diss. on Demons Possessing Bodies* in his *Diss. on the Old and New Testament*, ed. Mansi, *Wircch.*, 1789, Vol. III, p. 225) animadverts that it was necessary in the care of this demoniac (*Besessenen*) to give him optical demonstration that he was freed from his devils, in which demonstration the drowning of the swine was the best proof, as a return of the demons was in this event no more to be feared.

26. *Homeric Psychology, or a Commentary on Homeric Knowledge and Belief concerning the Soul*. Zullochav., 1796.

27. *Hufeland's Journal*, Vol. IX, No. 4, p. 3.

28. *History of Botany*, Altenburg and Leipzig, 1817, part I, p. 38.

29. *Vergil, Georgics*, IV, 454; *Ovid, Metam.*, X, I.

30. L. c., Sec. 92.

31. Cp. Cicero, *Tusculan Disputations*, III, 5.

32. Vol. 1, part 2, pp. 3-45.

33. Notes on Ovid's *Metamorphoses*, School Encyclopedia, III, I, p. 68.
34. Commentary on the Causes and Origins of the Stories of Transformations, Leipzig, 1786, p. 15.
35. Berlin Monatsschrift, 1784, March, p. 197.
36. L. c., p. 13.
37. Lycaon is generally called a son of Pelasgus (Apollodorus, III, 8, 1), sometimes a son of Mercury, (Schol. ad Theocritus, I, 124). Nicander calls him in Antoninus Liberalis, Chap. 31, an autochthon (indigenous). His origin therefore is lost in dim antiquity.
38. Cp. Herder's *Ideas for a History of Mankind*, Part III, pp. 170-174.
39. "Arcadians are descended from the Pelasgic stock, the most ancient peoples of Greece. They have accordingly transferred to themselves and claimed for themselves all the fables of the Pelasgic race as if they were their own, etc." Apollodorus, p. 655 ff.
40. Cp. Aristotle, *Problem. XXVI*, 61, Vol. II, p. 806, Ed. DuVal; Barthelemy, *Voyage d. j. Anachars*, Ed. Paris, Vol. V, p. 115; Breitenbach, *History of Arcadia*, Frankfort, 1791, Part I, p. 58, etc.
41. In order to make intelligible this peculiar phenomenon, that developed first among the Arcadian herdsmen, the reader should recollect the terror of the Samoyeds, Kamtchatkans, Yakuts and other Siberian peoples, a terror that impels them to the most ridiculous fear of spectres and magic. (Pallas, *Travels*, Part III, p. 76); the Scanto or Spavento (stampede or terror) of the Sicilian herdsmen (Swieburne (sic) *Travels in Both Sicilies*, part II, p. 458); the oracular voice of Pan so often heard in the forests of Arcadia, on which Pausanias (VIII, 36, 37) has something to say; and the like.
42. The sudden stampede of a whole flock, e. g. from insects (Voss on Vergil's *Georgics*, p. 180) and other objects was ascribed by the Arcadians to an all-pervading terror-fancy, the Montivagus Pan (Mountain-roving Pan). A passage from Valerius Flaccus (argon. III, 56); "It is sport also when he drives the herd terror stricken by the god (i. e., Pan) from the stables and the hullocks in their flight trample down the thickets."
43. On the great numbers of wolves in ancient Greece there is a passage in Plutarch which says that there was an ancient custom among the Athenians, that those who had more pasture than tilled land must join in the wolf hunt and carry on the war against the wolves.
44. Already in Rondelet, (*Method of Treating Diseases*, Book I, Chap. 41) is found an observation explaining the above on the influence of the mode of living upon the perverted imagination of the mentally unsound. He says that peasants and herdsmen generally imagine that they are animals, and, in particular, animals that they are accustomed to be afraid of.
45. The dates of Melampus are hard to settle, but, as Sprengel (*History of Med.* Vol. I, p. 90) thinks, he belongs in the mythical age. Herodotus (II, 49) says that he had learned prophecy from the Phoenician Cadmus and communicated it to the Greeks in the worship of Dionysius. This account shows the great antiquity of Melampus, about 220 years before the voyage of the Argonauts.
46. Melampus had divine honors after death. In Aegistheni in Attica a temple was erected to him, where a feast was annually held in his memory. (Pausanias, I, 44.)
47. Melampus was the first to use white hellebore, which later was called Melampodion.
48. Book II, Chap. 18.
49. Sprengel's *Contributions*, p. 46.
50. Book II, Chap. 2, Ed. Heyne, p. 89.
51. "The daughters of Proetus filled the fields with imitated bellowings." Vergil, *Eclogue*, VI, 48. Heyne says in a note on this verse: "First example of hysteria." Cp. also Politian, *Miscell.* Ch. 50, p. 63, Ed. Basil.
52. The contagious power of melancholia and insanity (Wahnsinnes) proves this. It is found particularly in uncultivated peoples (contagium psychicum) Cp. Sec. VI.

53. Eustath. on Odyssey, Book N, p. 1746, Ed. Rom., 1549, Sprengel, Contributions, p. 48.
54. Zazaath of Moses; Leuke of the Greeks; the white Baras of the Arabians.
55. Cp. Hensler, On Occidental Leprosy in the Middle Ages, Hamburg, 1790, p. 142.
56. Some say that he gave them milk from she-goats that had eaten hellebore.
57. L. c., p. 91.
58. Supposing that the Proetids wandered to the Stronghold (Geburge) Apesas, northward from Argos and in the vicinity of Nemea, they must have been chased at least 5 or 6 German miles (150 stadia) before they came to Sicyon. Cp. Sprengel's Contributions, p. 53.
59. The more the scab on the skin appears, the earlier can the white leprosy be cured. Cp. Avicenna, Book IV, Fen. 3, Tr. 3, C 9. Moses, too, says of the white leprosy: "But if the leprosy crops out on the skin, and from the head to the feet covers the skin, if the priest finds that the leprosy has covered the entire flesh, then shall he pronounce him clean." Levit. XIII, 12, 13. Michaelis (Oriental Questions, XI, p. 23, No. 8 on Levit., XIII, 12, 13) infers that when the leprosy covers the whole body or all the diseased patches in such a way that all appears white, it marks the purification crisis.
60. L. c., p. 53.
61. On poetry, v. 300.
62. The islands of Anticyra were famed for the great quantity of hellebore that grew there.
63. Sat. 4, v. 16.
64. Nat. Hist., Bk. XXV, Sec. 21.
65. Aulus Gellius, N. A., Bk. XVII, Chap. 15.
66. Book VII, Chap. 7.
67. Reil, On the Recognition and Treatment of Fever, Vol. V, p. 477, Halle, 1802.
68. Already off-printed in Mag. fur philosoph. med. und gerichtliche Seelenkunde, pub. by J. B. Friedreich, No. I, p. 71, Wurzb. 1829.
69. Bk. I, Chap. 105; Bk. IV, Chap. 67.
70. On Air, Water and Climates; Sprengel, Apology of Hippocrates, Part II, p. 609.
71. Var. Lect., Bk. III, Chap. 7.
72. Diss. on the History of Herodotus, Chap. 29.
73. Sprengel's Apology, p. 613, 614.
74. Patinus, Comment. on an ancient Document of Ulpia Marcellina, p. 413.
75. Gruner, Aphrodisiacus or the Venereal Plague, Jena, 1898 (sic.) Hensler, History of Syphilis, Hamburg, 1789, Vol. I, p. 211.
76. The almost insane Shamans and jongleurs of the present day, the Tungus and other Mongols are generally similarly unmanned like the Scythians.
77. Among the many cases that show the possibility of an actual psychic contagion, the following may serve as proof: Barbier, Marc, Bricheateau, Esquirol, Serres and Villermé relate numerous cases of morbid impulse to kill that occurred after the trial of the French woman, Cornier. So Marc is quite right in supposing that the public knowledge of such cases psychically disposes others to do similar actions. See Revue Medicale Française et Etrangère, Paris, 1826, Vol. IV.
78. Kireher, China Illustrated, p. 70, Amsterdam, 1767.
79. Gmelin's Travels through Siberia, Gottingen, 1751, Part I, p. 320.
80. Wittwer's Archiv fur die Geschichte der Arzneikunde, Vol. I, Part 1, p. 217.
81. This is quite natural in the development of peoples. The ancient world found something supernatural in every extraordinary, inexplicable occurrence, and called it a miracle. So the belief in miracles originates at the foundation of the nation, and has its psychical evolution in the infancy of the race. "Miracle is Belief's dearest child." Goethe's Faust. Accordingly mental diseases must be regarded as something supernatural (as inexplicable to the people) and coming from above. Consequently

lunatics (Wahnsinnige) like inspired persons are healed in the temples, and by Mohammedans are guarded as something holy. S. Carus, *Psy. of the Hebrews*, Leipzig, 1809, p. 395.

82. Life of Constantine, Book IV, Chap. 25.

83. Meyer's *Darstellung aus Italien*, p. 278.

84. Cp. also: *Recherches philosophiques sur les Americains*, Vol. II, pp. 19, 20.

85. On the *Noso Theleia* (female disease) in illustration of a passage in Herodotus, Leipzig, 1778, p. VII.

86. Cp. also Tollius' note on Longinus' *Peri Hypsous* (On the Sublime) Sect. XXVII, Note 15; Clement of Alexandria, *Cohort. ad Gent.* p. 14, Ed. Sylburg; also Pollux, Book VI, Chap. 30, contains the expression *Kinaios Androgynos Thelous Ten Psychen* (Lewd hermaphrodite fellow effeminating his soul.)

87. *History of Syphilis*, p. 210, 211.

88. Viz: from a discharge from the sexual organs.

89. *Histor.* IV, 20, 21.

90. Cp. Forkel, *General History of Music*, Leipzig, 1788, Part I, p. 268.

91. *Var. Hist.*, Bk. IV, Chap. XXV. (The title of the chapter is: "On the Extraordinary Mania of Thrasyllus.") Cp. also Athenaeus, *Deipnosoph.* Bk. XII. Schenk, *Obs. Med. Rar.*, Bk. I, p. 123, col. 2.

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(TO BE CONTINUED.)

KRAEPELIN ON "PARANOID CONDITIONS"

(Address delivered before the meeting of the Alienists of Bavaria in Regensburg, June 29, 1912.)

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TRANSLATION BY H. I. GOSLINE, M. D.,

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WITH emphasis upon the gaps and deficiencies which still appear in our inquiry into psychiatry from the clinical side, Hoche has, in several forceful papers, characterized the efforts which hark back to Kahlbaum, to arrive at a knowledge of disease-forms from their clinical pictures, as the pursuit of shadows. He urges that the aim proposed is not yet attainable for many reasons and that the endless pains spent upon clinical work is, therefore, wasted to no purpose. With this in view he advises that we turn with better advantage to problems that are in the process of solution and to more remunerative problems; in the first place, to the investigation of typical groups of symptoms since the uniformity with which they are repeated in similar settings bespeaks the fact that they are to be regarded as the true expression of mental adjustments which are typical and which are only set going by the disease.

We may agree with this latter conception, which has already been frequently adduced, moreover, with good results for the understanding of disease phenomena, without thereby giving up our approach toward the ultimate goal of every clinical investigation, the knowledge of disease processes. We may even welcome heartily the more accurate symptomatology of clinical conditions striven for by Hoche as an agent of importance in the solution of that greatest of our tasks. Even if the dis-

closures which we may expect of Hoche and his pupils in the future, give no deeper insight into the nature of the disease processes, and though they permit us no decision upon the future fate of our patients, yet they can be adapted to sharpen our eyes for individual clinical features. Then, too, certain uniformities about their combination will perhaps be discovered, the ultimate ground for which can then be looked for either in peculiarities of the mental make-up, or in the mode of invasion of deleterious influences.

A very enlightening example of the close relationships which exist between analysis of the clinical pictures and investigation of the disease processes, is provided by the realm of the "paranoid psychoses," even at this time so hazy. A quarter of a century ago, when we differentiated essentially only primary and secondary paranoia, the relationships appeared to be comparatively simple, and the result was that the diagnosis of paranoia in the hospitals was made to a wholly inordinate extent, since the demonstration of more or less fixed delusions without apparent affect disturbance, sufficed to make it. The great clinical differences among patients, grouped in this way under a single denomination, remained unnoticed by reason of this grouping. Very gradually at first the knowledge broke ground that paranoid conditions could not possibly mean a clinical entity. In quite the same way as it was demonstrated that delirium, which is still treated by Jacobi as a concept of disease, represents an exceedingly prolific symptom of very different diseases and as melancholia was recognized as a symptom of chameleon significance, so likewise must the paranoid delusion be forced from its place as characteristic of a definite disease form.

As an especially sharply outlined group there arises from the mass of delusion-forming "paranoid" psychoses, the group of the "querulants," the linking of a very one-sided fixed delusion which is inalterable in its main features to an injury, real or imagined. What this form shows, especially in distinction to the great mass of paranoid diseases, is the complete retention of the mental person-

ality not depending directly upon the delusion, a peculiarity which made the assumption of a "partial insanity," of a single "fixed idea" in a mentality otherwise sound, appear in this relation to be to a certain extent justified. For this reason the critique of the paranoia concept must first seize upon this fundamental relation. In addition to this, however, it happens that there are many curable paranoid diseases beside the many incurable ones; indeed, some have a periodic course so that the delusion, upon continued observation, not infrequently passes through phases, and finally the delusion-forming psychosis may at times be induced by definite external influences of a harmful nature, especially by poisons, even though they appear much more often to arise from internal causes.

All these experiences necessarily led to a dissolution of the shore-less paranoia concept. From the existence of a fixed delusion, just as little insight was to be gained into the nature of the disease process lying before us, as from the contents of the insane idea themselves; the origin of the disease, as a matter of fact, corresponded to certain general human or personal habits of thought, which assumed this peculiar form under special diseased conditions. In the place of paranoia, which could be held together only by strong retrenchments, if at all, there arose the jumble of the paranoid conditions, the sifting and organizing of which constitutes a task for clinical investigation just as important as it is difficult. Only very extensive and remarkably complete series of observations, can bring light into this region. If I make the attempt at this time to extricate at least a few groups of paranoid conditions, I am clearly conscious of the fact that it can be only a matter of gaining positions at which questions may be hurled, positions whose title will have to be proved later by more thorough investigations. I was aided very greatly in this consideration by the cases so carefully presented by Dr. Zerko at this meeting and at Eglfing. It is apparent that I must confine myself in this presentation here to brief catch-phrases; a more thorough description will follow in another location.

In the first place the question offers itself whether the term paranoia should be wholly given up, or for which group of disease conditions it can be retained. It appears to me that there is a definite sort of delusion-forming psychosis, whose nature would justify a distinction under that name. In that connection, we are concerned with the development of a mentally elaborated, inalterable delusion, which results from inner causes, is insidious and purely a combination with complete retention of the unity of the personality. Although a differentiation and characterization of the clinical picture, which would be unconditionally reliable, can hardly be given at this time, owing to the rarity with which such cases come into the hands of alienists, yet we may perhaps say, at least, that it is essentially a matter of abnormal development which takes place in persons of psychopathic disposition under the influences of the ordinary forces of life. Apparently, we do not have to do with a special disease process, but with a sort of "psychic malformation," which gains its peculiar clinical form for the first time, to be sure, in the struggle for existence. On this basis we might even explain the extremely slow development of the disease picture, and on the other hand, the development of the delusion from the personality, and the moulding of this latter with no sign of the disturbance. We shall have to assume that the root of this disease is to be sought in a peculiar "paranoid" predisposition, with which we frequently come in contact in other persons in a mixture of boundless self-esteem and suspicion, without its developing directly into the formation of a paranoia; to produce this result, perhaps, especially unfavorable external and internal conditions have to work in combination.

The clinical picture chiefly bears the features of the delusion of grandeur which usually rises to the surface after all sorts of inner conflicts and revolutions, as the fulfillment of secret wishes and dreams. The patients are world-benefactors, inventors, discoverers, founders of religions, statesmen, defenders of the throne, and they prove their high claims by their merits, their Heavenly calling,

their mystic origin. To give foundation to their delusion, they are at pains to distinguish themselves by challenges of all sorts, and they defend their demands with great persistence without, to be sure, thus entirely losing the feeling for the bounds which laws and the state place upon their activities. Indeed, in their conduct of life they are often peculiar, but, for all that, they do remain within the limits of that which is compatible with their maintaining an existence in the community. Exceptionally, and only by reason of special circumstances therefore, do they get into conflict with the social laws, and they yield, even under restriction, when they come face to face with insuperable objects. The disillusionments naturally to be expected from these experiences, the constant friction with the environment, regularly leads in time to the formation of ideas of influence which never become dominant, however, in the disease picture; the fundamental tone is always formed by the triumphant conviction of their own excellence.

The independence of the group of diseased personalities sketched here with light strokes may be assailed from two different points of view. First, we may ascribe them to chronic mania in the sense used by Specht, or, better still, to constitutional mania. It should be expressly admitted that in the realm of the affections mentioned, there are conditions which are very like paranoia. Within the latter, there is lacking the restlessness and changeableness, the desire for enterprise which refuses nothing as impossible, the irritability and the impulsive lack of consideration of actions, which we meet in mania. On the other hand, in manic patients we lose the insidious, constantly advancing, logical development of the delusional system; the delusion formation takes place more suddenly, and in a less orderly fashion; it depends distinctly upon the many violent fluctuations of the emotional equilibrium, and is far more subject to variation, at least in its details.

Moreover, we can conceive of the possibility that paranoia represents a form of schizophrenic delusional

system of especially slow and mild course; the paranoid tendency might be conceived as a minor sort of "latent schizophrenia." A perfectly convincing settlement of this question can scarcely be attempted at this time. However, it might be demonstrated in that regard that the peculiarly characteristic disturbances of schizophrenia are completely lacking in the patients whom I have in mind in this connection. To be sure, they often show a distinct defect of judgment, and especially a strong subjective coloring of this faculty, but they do not show the confused desultoriness of the thought connections shown by the early demented; mentally, they are always responsive, active, at pains to act in the direction of their delusion, and they give no evidence of independent disorder of the will. Nothing is to be seen of any lightness or, even of any disorderliness of the inner structure of the personality. I may, therefore, offer the opinion that at all events it is more to the purpose first to define this group than to blur its characteristics by merging them into the broad realm of schizophrenia.

It may, nevertheless, be regarded as an experience, perfectly well founded and generally recognized, that the disease process, dementia precox, like so many others, may also produce paranoid conditions. One may convince himself very easily of the fact that patients who at first develop chiefly only ideas of persecution or ideas of grandeur, or the two together, perhaps, after a shorter or a longer interval, show the signs of a frank dementia praecox, and may lapse into the end stages peculiar to that disease. It is not infrequently observed, also, that a delusion formation at first chronic later winds up in the introductory stages of a disease with the distinct ear-marks of dementia praecox, indeed, the paranoid picture can under proper circumstances act as the connecting link between two schizophrenic entities that are far removed from one another. It needs no further exposition to show that in this field, especially, the frequency of hallucinations, the absurdity and looseness of the delusion formation, its slight influence upon the shap-

ing of the activities, together with the characteristic disturbance of the emotional life and of the will, make possible the proper interpretation.

Those cases are somewhat more difficult to form an opinion about in which the end conditions, upon the disappearance of the stormy symptoms, do not retain their special coloring through the disturbances of emotion and of will, as usually happens. In such cases, the clinical signs of dementia praecox, relied upon by us, may vanish into comparative insignificance, while in essence only the hallucinations and delusions remain as residuals. The conditions which arise in this way I may designate as hallucinatory or paranoid feeble-mindedness. Most frequently, a part of the delusions arising at the height of the disease, is tenaciously retained without further development and without emendation; there often exist, in addition, hallucinations of all the senses. The activity is usually not influenced at all by these disease rests, or, at least, only transitorily; a certain insight into the pathological nature of the condition passed through may be present. Much less frequent appears to be the purely hallucinatory feeble-mindedness, the persistence of hallucinations without delusions, with insight into the disease more or less clear. The significance of these peculiar paranoid end stages of dementia praecox is evident, first of all, from the fact that almost uniformly disease stages such as conditions of excitement, depression, or stupor, have preceded, whose context discloses their relationship to the disease named. But, in addition, the results depicted are usually accompanied at least by suggestions of the characteristic disturbances, little eccentricities, shy, capricious manner, stereotypy, mannerisms, constraint, pretence of independence and energy, superficiality of the emotional reactions, variations in affect tone without adequate cause.

Of special note, is the fact that the delusional forms of dementia praecox quite generally begin in decades later than the other forms of the disease. While the greatest incidence in dementia praecox commonly comes

in about the twenty-fifth year, we see the paranoid forms develop frequently enough in the fourth and even in the fifth decade. This fact may point, in the first place, to the idea that we, perhaps, have to do in these cases with disease forms which should be differentiated from dementia praecox. More thorough observation teaches us beside that we cannot speak of sharp boundary lines. There are, on the one hand, many paranoid conditions, even in the more adolescent period; on the other hand, too, the remaining forms of dementia praecox can make their first appearance under the proper circumstances in the later years of life; only the frequency of single clinical pictures shows a certain displacement with increasing age. Critical examination is chiefly rendered difficult by the circumstance that the actual point in time of the real onset of the disease cannot be determined with sufficient accuracy. Especially, do slight changes very frequently precede the striking symptoms by years; changes which certainly never come to the knowledge of the physician. Yet, it is doubtless true that the tendency of dementia praecox to delusion formation increases with age. If we consider that delusional psychoses, in the main, belong chiefly to the more advanced periods of life, and are almost unknown, in children particularly, the assumption is quite evident that here there is some relation to the natural transformations of the mental personality. It is not the variability of the disease processes, in my opinion, which bears the onus of the paranoid coloring of the clinical picture, but this is itself rather to be regarded as a form of reaction of the fully developed, mature, and, perhaps, fixed mental life which is forced by external and internal stimuli, less to fundamental changes in the total reaction than to diseased functioning of the judgment. That the natural proclivities of men may forcefully influence the nature of the disease, is apparent among other things from the increasing frequency of states of depression with advancing age, as I was able to determine in manic-depressive insanity.

Though it cannot be doubted that many paranoid conditions belong to dementia praecox as an integral part, yet great differences of opinion still prevail as to how far the realm of dementia praecox may be extended. I previously presented the chief mass of the dementing paranoid diseases as forms of expression of dementia praecox though with a proviso, and Bleuler opposed this point of view very firmly, while such an extension of the dementia praecox concept has been assailed by numerous other investigators, also. A thorough re-consideration of this question has, in fact, brought me to the opinion that we may advise, at least temporarily, that the limits of the schizophrenic "paranoid dementias" be more narrowly drawn, and that a point of departure be set down for a series of forms of paranoid dementia. Of decisive value in forming my opinion was the consideration that in these groups the schizophrenic phenomena were either entirely lacking or, at least, were not more strongly expressed than is ordinarily observed at times in other psychoses which certainly do not belong to dementia praecox, in paresis, in senile dementia, in many syphilitic or alcoholic conditions. Of course, single clinical forms behave quite differently, so that to unite them into an entity must be regarded as merely a temporary experiment to bring certain facts into teachable form. I have chosen first the general term "paraphrenia" for the scientific understanding; it must be decided later whether a paraphrenia may be maintained as an independent disease group, and how far, and, chiefly, to what degree the clinical conditions now contained therein are related to one another.

The emancipation of the "*Délire chronique à évolution systématique*" described by Magnan has been most distinctly accomplished. I cannot agree with this conception in general. According to Magnan's presentation, his disease form embraces a group of cases which I have not the least idea of submitting to dementia praecox, either from their clinical aspect, their course, or their outcome. It is to be granted, however, that for all this

a fairly large group of cases still remains in *Delire chronique*, for which investigation may provide a definite description; in order to make their historical origin distinct, I propose for them the term "*paraphrenia systematica*," which characterizes their peculiarity tolerably well at the same time. We are concerned with the rather slow development at first by combination, then by hallucination, of a delusion of persecution, and of an idea of grandeur, of gradual course, fixed and systematized with terminus in a marked degree of mental impairment. The patients are always logical in thinking and in acting, mentally active, capable of independent employment, though the ultimate quixotism of their delusional ideas distinctly reveals the development of a mental malady. The development of the delusion begins with references and meanings; only after years do hallucinations flock in, at first, of a simple nature. Ideas of persecution regularly make up the end; the idea of grandeur arises much later. Independent will disturbances are absent, unless we would count as such a certain swaggering mannerism. The relation of these patients to their environment is completely governed by their delusion, which they also use as a motive for their actions. Thus they regularly get into serious difficulties with the established order, in time, and they are much more dangerous patients than the confused, planless, schizophrenics, or even than the paranoiacs, who control themselves with difficulty because they proceed prudently and with deliberation, though at the same time with great passion and disregard for consequences. In distinction to the two groups named, these patients suffer most from the worst of their ideas of persecution and from the results arising from their diseased actions, namely, from the withdrawal of their freedom; they are the most distressed of our patients and in comparison with the duration the most difficult.

As you see, in contrast to *dementia praecox*, there are to be adduced in addition to the general ideas already brought forward above, the much slower course which advances constantly, however, the mental amplification

of the delusion, the keenness of the emotional reaction, the orderliness and logicalness of the actions and the late appearance of hallucinations. Even after an uninterrupted course of ten years' duration, there is no question of a far-reaching disturbance of the personality, and, as a matter of fact, severe dementias appear, never to be reached. Opposed to paranoia in the definition attempted above, it is to be emphasized that here we have to do with an actual disease process which leads to distinct impairment as demonstrated by the hallucinations. Had we assumed in that disease an abnormal development merely, it is evident that essential parts of the healthy personality would gradually be destroyed. Accordingly, judgment and action are completely out of harmony with the normal regulations, which appear quite upset in the paranoiacs, but not wholly lost from view.

A second rather rare disease form, which I have tried to define, the *paraphrenia expansiva*, seems to occur almost exclusively in the female sex. It is characterized by the gradual development of a grandiose delusion with cheerful manic-colored affect and easy excitability, which usually results in the field of speech in light talk and which can temporarily rise to more violent expression. Ideas of persecution and hallucinations, especially visions, usually join company with the disease picture at times, but play no important role; on the other hand, falsifications of memory appear to a marked degree at times. The conduct and the activity is in general well ordered; it is greatly influenced by the delusion but less permanently, and with less force. As a rule, the condition of the patients suffers no farther changes of importance for many years; they hold firmly to their grandiose ideas, are constantly cheerful, accessible, talkative, tractable, but gradually become somewhat weaker in their judgment and less coherent. Deep dementia does not appear to take place. One is at first tempted in these cases to think of manic conditions. Apart from the fact that it is, after all, a question of single diseases in life, and that depressions

are completely lacking, the excitement is entirely too infrequent, while the persistent fixed delusional ideas stand in the foreground of the disease picture. In addition, no cure takes place, although several of my observations covered more than a decade, even reaching eighteen years, but there develops a distinct condition of weakness in spite of the mildness of the disease symptoms and this must be regarded as an invalidating one. It seems that Thalbitzer had in mind cases belonging to this group in his description of a "manic delusional state."

Still less frequent than the expansive paraphrenia is that form which I may designate as the "confabulating" for in it the delusion formation is made possible almost entirely by falsifications of memory. The patients are always prudent and logical, but develop ideas of persecution and of a grandiose nature, which are linked to definite delusional experiences from the past, with all the details elaborately colored. Fresh new-formations are frequently added to the old mistakes of memory, which are always repeated in similar form; and disappearance or denial of delusions created earlier also takes place. At times the confabulating is confined only to a certain period of time, later to disappear wholly into the background. The affect tone of the patients is on the whole cheerful and confident; they are talkative and approachable, well ordered in their conduct and their actions, but often allow themselves to be led by their delusions. The course of the disease is a slowly progressive one; the delusional ideas gradually become less coherent, the whole manner of the patient more stupid. This very last fact may mean a relation to that form of dementia praecox which Sander has described as "Idiopathic paranoia." My patients, however, lack all special schizophrenic disturbances, especially those of the will, and they gave no evidence of dissolution of the personality; hallucinations were not demonstrable. A certain kinship of this form to the preceding is not improbable.

As dependent of the group of the paraphrenias, I may finally call your attention to those cases which

I described previously as "dementia paranoides." Since this name has in the meantime become generally adopted for the paranoid forms of dementia praecox, it seems to me to be more to the purpose to bring into use the term "paraphrenia (or dementia) fantastica," for the form meant. In this we see the massive production of senseless, incoherent, changeable ideas of persecution, and of grandeur, changeable though they move in similar fields, with abundant hallucinations and confabulations, and passable retention of orderliness in conduct and action. The emotional tone is predominately exalted; the patients are approachable, talkative, but uncommonly careless in their speech productions, which are interspersed with neologisms and plays upon words. The mental responsiveness, such as the inclination and capability for employment, is retained most constantly, yet, after some time an increase in the confusion and a certain dulling of the emotional relation and of the will cannot be mistaken. These peculiarities seem to bring paraphrenia fantastica again into closer relation with dementia praecox, to which I previously ascribed it. A positive differentiation is not possible at this time. However, we may have in that remarkable group of cases before us which start with pure confusion of speech without other striking disturbance of the will, the opposite of the disease-picture mentioned here. Both forms show us a single symptom of dementia praecox in bold relief, the former, the confusion with senseless delusion formation, the latter, the "schizophasic" disturbances, as the looseness of the connection between idea and motor expression by speech may be called, without the other characteristics of that disease developing in addition. One might be tempted, on account of the other similarities of the clinical details and course, to ascribe both forms to unusual localization of the schizophrenic disease process, corresponding somewhat to the atypical forms of paresis. Anatomical investigations may perhaps decide this question some day.

Just as in dementia praecox so paranoid symptoms may arise in manic-depressive insanity. A part of such

cases has contributed to the formation of the concept of the disease "acute paranoia." There are, doubtless, cases of manic-depressive insanity which progress with strikingly weak development of the pathological excitement or depression, and with systematized delusions and hallucinations. Yet, the examiner, on longer observation, will scarcely miss the patient's diminution of will and the loss of the power of decision, as shown in the ambition and the inconstancy. In addition, the content of the delusion is usually not perfectly constant. Many ideas disappear; others arise anew, especially in connection with the stronger emotional outbreaks. The activity, also, is determined far more by the affect tone than by the content of the delusion. Lastly, the picture changes after several months or years; either improvement takes place or quite a different coloring of the delusion, with at times, also, a transition into the purely manic, or depressed, stage of the disease. One can frequently observe several attacks of similar course ("periodic paranoia").

Considerably more difficult to distinguish, as noted above, are the constitutionally manic conditions with delusion formation. We find here, for the most part, a mixture of ideas of persecution and of grandeur; not infrequently, also, the picture of the litigation psychosis greets us. Yet, we must stick to the fact that in these cases we have to do with disease conditions which are to be fundamentally distinguished from paranoia in the sense of a psychic malformation. With sufficient observation, this will almost always be possible even for the individual case; the view-points that are to be considered in this connection were already mentioned above.

Those paranoid conditions which accompany age take a special position. Attention has already been called to the fact that the tendency to delusions increases with advancing age; we must, therefore, expect that various disease processes in the later decades will show this common feature. Unfortunately, our knowledge of the psychoses which arise in the years of involution is still quite deficient; we are able to distinguish a part of

them while others are not at all satisfactorily to be submitted to our clinical system. We cannot, therefore, decide at this time whether independent paranoid conditions, beside those already mentioned, or which ones, are to be recorded in the involutional period. One form I have tentatively described earlier and denoted by the name pre-senile delusions of influence; unfortunately the name, as is hardly to be avoided in the incompleteness of every description, has been frequently used for conditions quite different. Evidently, the form that I meant is very rare; I have seen only a small number of cases which I could count with it; they are always women of about fifty or fifty-five years of age. The clinical picture is characterized by the peculiar vagueness and inconstancy of the delusions, which are regularly depressive in nature and which are not in the least systematized. The patients produce all sorts of indefinite ideas of influence, at times quite fantastic, the contents of which frequently change in spite of many lasting features; they do not hold firmly to their delusion, allow it to be talked out of them comparatively easily, only to show the same or similar ideas anew very soon. Dementia does not appear to follow in spite of a rather long duration of the condition, nor does an actual recovery with complete insight into the pathological nature of the condition take place, although a certain feeling of something wrong may be present, and though the most foolish fancies are again rectified. On the whole, one gets an impression as if the delusion stood in a certain relationship dependent upon hazy feelings of anxiety; it also shows distinct variations. However, I do not believe there is any connection between these cases and manic-depressive insanity since the emotional disturbances are very slightly developed, and every evidence of a depression or exaltation of the will is absent. The rather chronic course also seems to militate against it, although we should attempt to secure more insight into the condition by further observation of some cases belonging to it.

Much more frequent and in the main features well known, is the senile delusion of persecution which belongs to a later period of life, from the end of the seventh decade. Here, also, women appear to be more often affected. The development of the disease takes place sub-acutely or chronically. The patients feel depressed, made ill in the most various ways; their belongings are stolen, spoiled, changed; there is poison in the food, something to stupefy them in the bed, a foul odor. Frequently hallucinations of hearing come on, chiefly insulting, threatening, ridiculing remarks. The content of the delusions is monotonous and paltry; a characteristic development and course seldom takes place. With changed environment, the delusion formation may cease for a shorter or a longer time without a complete rectification taking place, however. Disturbances of the will are completely lacking; the emotional reaction is slight. One will never fail to get the signs of a certain senile mental wasting, though the essential presbyophrenic symptoms are lacking, the profound disturbance of perception, confabulation, confusion. The disease-picture may continue for rather a long time without essential change until gradually the signs of senile dementia distinctly appear. It is more logical to consider the disease as a pathological increase in the uncertainty and the mistrust which often accompanies the lack of the bodily and mental powers into senility. Thus far, points of contact may be seen with the psychoses of the deaf, to be mentioned later. The general basis of the disease is provided by the processes of senile decay; the special paranoid clothing of the clinical picture, however, may be determined by the reaction of the total personality, which is still fairly well retained in these cases, upon the disease injury which is more or less distinctly felt.

As a third main group of fair size besides the "psychic malformations" of true paranoia and the endogenous paranoid conditions, we have to mention those forms which are aroused by external causes. Of first importance are here¹ to be mentioned the paranoid psychoses caused

by the influence of poisons, especially by the abuse of alcohol. An unusually striking paranoid picture is, of course the alcoholic paranoid, the alcoholic hallucinosis, together with certain forms of manic-depressive insanity, mentioned above, which has really furnished the foundations for the theory of "acute paranoia." That this union of disease forms which clinically are widely separated from one another, and only superficially similar under a common designation, is untenable, needs no further proof for one who will not be satisfied with the definition of symptoms merely. However, the expression, "acute paranoia" appears especially purposeless to me, because by this name the false idea of a nearer relationship with "chronic paranoia" may be awakened. Certainly one may speak of acute and chronic "alcoholic paranoia" which, as a matter of fact, stand in very close relationship to one another; we must, however, remain aware of the fact that the alcoholic paranoia has not the slightest in common with the disease form paranoia except a remote, superficial resemblance.

From the acute paranoid alcoholic psychoses rapid transitions lead over into the chronic, which are nothing but unrecovered end stages of the former. They develop from the delirium as well as from the hallucinosis, and appear to be much more frequent in cases of insidious poisoning by over-indulgence in beer than in pure whiskey alcoholism, to which the acute forms and Korssakow's psychosis are peculiar. The clinical picture of the chronic paranoid psychoses of alcoholic origin, whose course often runs in stages, and with variations, as a rule betrays its mode of origin in many individual features, even aside from its immediate origin from the acute condition. The patients are, for the most part, approachable, mentally active, at times sensible to a certain degree, and they constantly show the humorous feeling of the drinker; the content of the hallucinations, also, usually corresponds with that of the introductory condition, although hallucinations of hearing and of general sensibility exceed those of sight more and more. The delusions are at first chiefly

ideas of persecution; later, however, ideas of grandeur may develop. As the disease progresses it comes either to a gradual fading of the delusion with or without readjustment and regularly with a distinct damage to the mental activity, emotional spontaneity, power of action and independence, or there develops a paranoid feeble-mindedness in which the delusion may become progressively more fantastic and incoherent. Such pictures may gain great similarity to certain end stages of dementia praecox, but Gräter has very definitely stopped the idea that there is, as a matter of fact, any regular connection between dementia praecox and alcoholism because of this similarity.

That such combinations not infrequently exist, is self-evident from the frequency of both diseases and is settled also by experience. However, for the founding of such an assumption in individual cases, one will have to give the proof that beside the disturbances occasioned by alcohol, there are also symptoms present which are foreign to the alcoholic form, and which are peculiar only to dementia praecox. As such, I would regard the well-known disturbances of will, and the resulting dissolution of the personality, but not the fantastic nature of the ideas of grandeur and of persecution, nor even the idea of bodily influence since these disturbances very similarly greet us in the acute alcoholic psychoses. Their occurrence may be favored by the weakness of the processes of comprehension as a result of the severe injury due to the alcohol. Even the formation of new words, frequently observed, cannot be regarded as a symptom foreign to alcoholism. If we allow tremens cases to read from an empty page, we ordinarily get the strangest neologisms; the conditions for their ensuance are doubtless subserved by the alcoholic psychosis. Lastly, even the continuance of the disease phenomena in spite of complete temperance, is no ground for doubting the alcoholic origin. We may very rightly assume today that the acute, as well as the chronic, paranoid alcoholic psychoses and Korsakow's disease, are "metalcoholic"

diseases, whose course, therefore, is independent of the co-operation of additional acute intoxications to a certain degree, as the example of the last named disease makes evident sufficiently distinctly. Great difficulties may arise as to the significance of those cases in which the mental responsiveness and the humor of the drinker, fades into a stupid poverty of thought, with or without persistence of single delusions and hallucinations. This evolution may come to a close within the confines of an alcoholic dementia, when the disease approaches more nearly the end stages of severe Korssakow's conditions. A sufficient reason for assuming a relation to dementia praecox here, is present only when characteristic disturbances of will may be proved in addition to the stupidity; marked inactivity of perception will speak against such a construction.

Very closely related to the alcoholic forms are the paranoid conditions produced by the abuse of cocaine, in which we can distinguish both acute and chronic forms. We do not need to enter upon a closer description of the condition here, where we are only concerned with the laying of firm foundations for right methods of clinical observation. Only this much may be said, that they are distinguished, also, by the peculiarity of the "microscopic" visual hallucination, as well as by the frequency of auditory hallucinations, ideas of persecution and of jealousy, especially by the admixture of a will excitement, such as usually accompanies alcoholic intoxication, but not the metalcoholic conditions. The patients are inconstant, inclined to quick actions, their ideas are flighty, they are verbose, showing mania for talking and writing.

Far less thoroughly studied than the toxic paranoid conditions, are the corresponding pictures which come to light occasionally on the basis of lues. Their recognition has become possible with some certainty by the aid of the Wassermann reaction. But even with the evidence of this test, we are not justified without further ado in considering a paranoid condition existing at the time

as an expression of lues, since we may be concerned here with a chance combination. As far as may be seen today, it appears, however, as if the paranoid conditions of lues might at least be separated from similar paranoid forms of dementia praecox in general by all sorts of clinical signs, although our experience with the single case may still refute this frequently enough. We are concerned chiefly with a delusion of persecution, which is often accompanied by single ideas of grandeur, and especially, also, by auditory hallucinations. The delusion is usually fairly uniform and slightly developed, and it does not influence the actions very much. Independent disturbances of the will are lacking; the conduct remains natural and affable. The emotional tone shows a remarkably sharp variation; the patients are often very excitable and then develop active delusions under the proper conditions, later to suddenly become quiet again with partial disappearance of the delusion. As the disease progresses the patients show poverty of thought, become dull and weak willed, while monotonous barren delusions, or even hallucinations of the senses, persist. At the same time other signs of lues beside the Wassermann reaction in the blood may be shown, as a rule, such as increase of the cells in the spinal fluid, absolute lack of reaction in the pupils, or absence of reaction to reflected light, absence, inequality or exaggeration of the tendon reflexes, seizures, disturbances of taste, cutaneous scars.

At this point tabetic psychoses should also be considered briefly; these very ordinarily present a paranoid picture. On the one hand we observe acute conditions which resemble the alcoholic psychoses to a high degree with their lively hallucinations of the senses. In them, however, there is lacking the peculiar blunt, lightly humorous texture, which customarily accompanies the latter; they are more often accompanied by the severest states of anxiety. In addition to these, however, chronic forms occur with delusions of persecution and of grandeur, in which the tabetic pains and parasthesiae provide material for marked somatic ideas of influence. Patients

who are quite sound and logical ordinarily assume a certain systematization; the tone is predominately euphoric or excited. Independent disturbances of will are lacking, although the patients gradually become weaker mentally.

In the last sub-group of the exogenous paranoid psychoses, we are concerned with the pathological action of psychic causes; here essentially emotional disturbances alone come into consideration. The most striking examples are given us by the experiments which are made on the greatest scale by the political power, with the repressing influences exerted by the deprivation of liberty upon the mental life. In such cases paranoid conditions frequently arise, apparently chiefly in personalities predisposed to such ideas, as appears to be the case for the great majority of mental disturbances brought about by psychic causes. The reactions, which are aroused in the minds of prisoners, under the stimulus of the withdrawal of liberty are in two directions. First, anxiety for the future and hate of the oppressors will arise; on the other hand, the lively wish will come to life to get away from restraint by any means possible. The first reactions form the point of origin of the well-known delusions of persecution of prisoners. The anxious suspicion, linked with the feeling of helpless dependency, leads to the delusion of reference, of influence, and ideas of poisoning. Then, hallucinatory perceptions arise, ridiculing, threatening, insulting voices, and at last in some cases, especially during the night, dreamy states of confusion in which the patients believe themselves influenced, maltreated, injured by violence. In a later course, hallucinations and delirium of an expansive coloring may come on, a sign that the form of the clinical picture is influenced by the passionate wishes slumbering in the background of the mind which naturally draw new fuel from the struggle against the gloomy reality.

Still more definite is the origin of delusions from the inextirpable longings of the heart, forms of delusions of innocence, and of pardon, developing in convicts after many years of imprisonment, but more especially in

"lifers." Patients who earlier, perhaps, have openly confessed their guilt, or, who were convicted without objection, suddenly bring up the assertion that they were convicted unjustly. The affair took place quite differently than was assumed at the trial; the witnesses perjured themselves; the proper witnesses were not obtained, but will now provide the complete proof for discharge. Apparently we are here concerned with a gradual repression and sublimation of painful, distressing memories. It corresponds in the greatest majority of cases with the process which even in healthy individuals, slowly but surely removes the thorns from the past and makes old age the panegyrist of times gone by. In a special degree, are we also accustomed subsequently to relate our own activities in the difficult days, and to amplify them so that the role which we played shows us an incomparably more favorable picture in retrospect. Closely related is the origin of the delusion of pardon, well pictured by Rudin, the certain conviction which arises in the prisoner that he has already been pardoned, although no one has told him so, and that he may now go upon his way, aye, that care has already been taken outside for his shelter. Who is not reminded here of man's passion for absolution, which breaks over every bound, of his tendency, for consolation for the pains and deprivations of life, to paint for himself with all his imagination, the splendors which will await him when he goes to Paradise, Walhalla, or the Happy Hunting Grounds.

The common characteristic of all these "psychogenic" paranoid conditions is that the delusion formation remains limited to a definite circle of ideas, although aroused by the emotional activities and does not develop essentially farther. The delusion under which the patient labors is not set right, however, as long as the pressure lasts. At times it does not change even with freedom, but the delusion then loses its awful significance for the patient; it is no longer made out of whole cloth, it is not expanded, it is even forgotten, in part; it fades. Here, too, the schizophrenic disturbances of will are absent, although,

especially in the case of ideas of persecution and of grandeur in prisoners, hysterical symptoms occasionally come under observation, stupor, silly excitement, seizures, dream states. Dementia never occurs if we leave out of consideration the general narrowing influence of long years of imprisonment upon the outlook, the stunting influence upon the emotional life, and the paralyzing effect upon the will.

A special group which belongs here appears to me to be formed by those infrequent observations which I have been in the habit of embracing for many years under the designation "psychoses of the hard-of-hearing and of the deaf." It is understood that not all mental disturbances are plainly meant which are combined by chance with defects of hearing, but a definite kind of delusion of persecution which appears to me to stand in the closest causal relationship with the inability of the patients to follow the utterances of those about them. From it arises next the feeling of uncertainty and suspicion so usual in the deaf and the hard of hearing, which later may gain pathological form and proportion. Very often auditory hallucinations come on, mostly with rather indefinite contents. The patients develop an active delusion of influence, think that they are watched everywhere, spied upon, insulted, ridiculed and laughed at. They feel bitterly that they are being made ill, outcast, despised, they complain, become reticent. The delusion, as a rule, remains very uniform and moves constantly in the same circle of ideas without development, without special systematization, mostly also without rectification, although it can disappear more or less completely by change into more favorable conditions. The conduct of such patients, apart from single deluded actions, is in general not striking; they are able to support themselves by their own labor.

Here and there we observe that a true paranoiac makes one or more persons of his acquaintance converts to his ideas. This is especially frequent in founders of religions; but discoverers, also, and defenders of thrones,

as well as litigants, often find defenders who join them blindly, swear by them and under certain circumstances make remarkable sacrifices for them. Even in these "induced psychoses" we are concerned with paranoid disturbances. They, therefore, show the same peculiarities as the former group. The delusion is limited to the circle of ideas aroused immediately from the outside, and undergoes no independent development in addition. As a rule, it wanes very quickly as soon as the individual is removed from the influence of his diseased notions, although it happens at times that it is not rectified. Hallucinations are completely lacking apart from possible occasional hysterical tantrums. It is self-evident that such cases never go on to dementia.

As a last form of psychogenic paranoid conditions, we have to present the litigation psychosis to which the litigation of the pension-hunters, as far as it is pathological, appears to be closely related. As far as litigation is an expression of an independent disease and not merely part of a manic-depressive insanity, or of a dementia praecox, we again approach the narrower concept of paranoia as already pointed out above. Even here the inner structure of the mental life remains undisturbed; the thinking and the acting completely logical apart from its influence by the delusion. Hallucinations do not occur; falsifications of memory may play a certain role. The delusion is systematized corresponding to the mental responsiveness of the patients, and the severity with which the thought processes are directed for years, to the pathologically colored relationships of life. On the other hand, the linking of the delusion to a definite external cause and the limitation to a narrow circle of persecutory ideas is variable; the heightened self-consciousness which accompanies this, experiences no delusional amplification. The constant quarrel into which the litigant is driven by his delusion, serves as a constant stimulus to the delusion. Only after many years' duration a narrowing of the circle of ideas takes place, a certain dulling of the emotional responsivity and a diminution of the will. The

delusion remains constant as an unrighted disease product, but it gradually loses its driving force and expires in long-breathed, monotonous memorials. We are here reminded of those transformations which the prisoner also experiences in the constant hopless battle with the forces which choke the soul and the body.

Even if the litigation psychosis develops first under the influence of a definite injury, actual or imagined, it cannot be doubted that its origin presupposes a peculiar "eristic" disposition, since similar or much worse injuries in the great majority of cases do not produce such disease symptoms. At this point correlation may be established with true paranoia, which we had deduced from the pathological reaction to the ordinary stimuli of life of a personality predisposed to paranoia. As a matter of fact, the close relationship of the litigation psychosis to paranoia has always been recognized; one may designate it as that form of paranoia which is not produced especially by the struggle for existence, but by the struggle for a right method of progress. From the latter the paranoiac who is undeceived by the narrow correspondence between hope and actuality, imperceptibly passes over into that fairyland of airy dreams; on the other hand the litigant is led by the defeats which he suffers first to a delusion of persecution but with a compensatory increase in his self-importance; there may be all sorts of transitions here. In paranoiacs it is fundamental, in litigants it is a matter of course, that a satisfactory issue from the battle between diseased demands and the opposition of the environment, is impossible. Therein lies the reason for the immovable nature of the delusion, and its continuation which we do not find in the other psychogenic paranoid conditions which are caused by transitory influences. . . .

The views presented here, as I scarcely need say again, are only a tentative experiment to pick out a series of components which are now distinguishable from the variegated contents of the old paranoid concept. In attempting this a great multiplicity of disease forms has

arisen. Whether this grouping is the right one, at least in the main, and in what direction it needs enlargement, stands open to conjecture. However, it may be that the points of view proposed may be found useful as preliminaries for making greater series of observations. The fact that the paranoid conditions here assembled do show the greatest differences in single particulars, appears very encouraging to me. In one case we are concerned with ideas of persecution alone, in another with delusions of grandeur, or with a combination of the two. The delusion formation can take place purely by the method of combination, be accompanied by hallucinations, or be intimately associated with falsifications of memory; the hallucinations may belong predominately now to this sense and now to that. The delusion may exercise a very slight influence upon the actions, or control them absolutely; judicious decisions and objections may at times be potent to transfer a delusion into fact, at other times they may have little or no weight. The inner coherence of the personality may be destroyed or remain intact; independent will disturbances may be combined with the delusion or be absent. The development of the disease may take place acutely or chronically, it may be stationary or progressive. The delusion is systematized in one case, in another incoherent and full of contradictions, here changeable, there uniform, here bubbling over with ever new ideas, there stupid, limited to few circles of ideas. The pathological ideas can be retained steadfastly, can form a constituent part of the personality; they can also fade, lapse into the forgotten, be wholly or partially rectified. The emotional tone may be excited into anxiety or passion, may be euphoric, indifferent, or very variable.

All these and many other differences which I cannot repeat exhaustively here, without doubt have their clinical significance. They show in one way or another the disease process lying at bottom, if not for itself alone, yet in combination with other signs which come on at the same time. If one were to follow all these details according to Hoche's

proposition, and thus provide himself with as complete a knowledge as possible of the various forms in which the paranoid condition may appear, his task would certainly be solvable, although it must be taken into consideration that we are accustomed all too easily to overlook differences if we are not aware that they are important. But it is settled that we would gain a comminution of the disease-picture into all its details. . . . what object would we gain if the significance of the confusing multiplicity of details were to remain hidden, if we were not aware of what is essential and what is unimportant for clinical observation? Could one really speak of work worth while if the penetration into the modes of action of the condition had at the same time nothing to tell us about the nature of the disease processes underlying or about the future of our patients?

Whatever is important in this respect and what is clinically without meaning can be definitely recognized from the grouping of the observations according to diseases or, at least, according to course. Indeed, we first become aware of the differences in disease conditions, as a rule, by the fact that they show us differences in course. Thus I come, on the basis of the series of observations here compiled, to a decision the exact opposite of Hoche's. It appears to me to be chasing shadows if one breaks down symptom complexes without knowing whether the effort spent in so doing has any clinical value. If one is first familiar with a series of disease courses then and only then is it actually of the greatest importance to give one's self an account of whether the symptom pictures belonging to them agree or are different, and in what particulars. In this connection, the investigation of grouping into which the disease symptoms combine, is the indispensable pioneer work for the gaining of a practical diagnostics and prognostics; without this goal it remains a mere description of details which may possess a certain collective value, to be sure, and may uncover all sorts of regularities, but which can never satisfy anyone permanently.

HEAVENLY BRIDEGROOMS*

BY THEODORE SCHROEDER

AND IDA C.

"The Sons of God saw the daughters of men that they were fair; and they took them wives of all that they chose."

Genesis 6:2.

"The demons, then, hearing these prophetic words [Genesis 49: 10, 11,] asserted that Bacchus was born the son of Jupiter; they ascribed to him also the invention of the vine, and in the celebration of his mysteries led an ass in procession, and taught that Bacchus was torn in pieces and taken up into heaven." Justin Martyr's Apology, I. 71.

Justin also draws a comparison between some of these gods and Christ, to show that Christianity claims no more for its god than did the heathen for those whom they called "Sons of Jove." He says:

"When we affirm that the Word, which is the first-begotten of God, was born without carnal knowledge, even Jesus Christ our Master, and that he was crucified, and rose again and ascended into heaven, we advance no new thing different from what is maintained respecting those whom ye call sons of Jupiter. For ye well know how many sons your approved writers attribute to Jupiter; Mercury, the word of interpretation and teacher of all men; Esculapius, who was a physician, and yet struck with lightning and taken up into heaven; Bacchus, who was torn in pieces; Hercules, who burned himself upon the pile to escape his torments; Castor and Pollux, the sons of Leda; Perseus the son of Danae; and Belleroophon, born of human race, and carried away upon the horse Pegasus * * * * * Neither

*Continued from February 1916.

is it necessary that I should relate to you, who already know well, of what kind were the actions of each of those who were called the sons of Jupiter; I need only say, that the writings in which they are recorded, tend only to corrupt and pervert the minds of those who learn them; for all take a pride in being the imitators of the gods * * * * * But if we say that he [Jesus] was begotten of God, in a manner far different from ordinary generation, being the Word of God, as we have before said, let this be considered a correspondence with your own tenets, when ye call Mercury the word who bears messages from God. And if any one objects to us that He was crucified; this too is a point of correspondence with those whom ye call the sons of Jupiter, and yet allow to have suffered * * * * * Again, if we affirm that he was born of a virgin; let this be considered a point in which he agrees with what you (fabulously) ascribe to Perseus. And whereas we say that he made those whole, who were lame, palsied and blind from their birth, and raised the dead; in this too we ascribe to him actions similar to those which are said to have been performed by Esculapius. Justin Martyr's *Apology* I, 28, 29, 30.

We thus see that the heathen gods and heroes whose father was Jupiter, the Christian Messiah whose father was the holy spirit and the traditional "giants" whose fathers were angels, were, in the eyes of at least one Church Father but different aspects of the same underlying principle—the possibility of marital union between dwellers in the unseen world and dwellers upon the earth, for the purpose of begetting children. Today, however, we look upon the story of virgin born Perseus as fabulous.¹ But the ancient heathen opponents of Justin seem to have accorded a scant respect to the story of the virgin-born Jesus as we do to the story of virgin-born Perseus. Now to laugh to scorn the birth of Perseus from the occult union of God with one virgin, and then to accept without question the birth of Jesus from the occult union of God with another virgin, is somewhat inconsistent. On strictly logical grounds, if one story be false, so may the other be false; if one be true, so may the other be true. But Perseus is only one of many virgin-born heroes or gods. We find these

children of a visible earthly mother and an invisible, celestial mysterious father, the world over, in all ages.

There was Buddha, the child of Maya and a celestial being god who, in the form of a white elephant, entered her side, or according to De Gingnes (See Higgins Anacalypsis I, 157) his mother conceived by a ray of light without defilement.

The Hindu Krishna was born of a chaste matron, who, though a wife and a mother, is always spoken of as the Virgin Devaki. Krishna, by the way, has many attributes in common with Kama, the East Indian god of love, corresponding to the Latin Cupid. He is represented as black—a symbolism to which I will return later on.

The Egyptian God Ra was born from the side of his mother, "but was not engendered."

The Mayas of Yucatan had a virgin-born god, named Zama.

Among the Algonquin Indians we find the tradition of a great teacher, by name Michabou, who was born of a celestial Manitou and an earthly mother.

"Upon the altars of the Chinese temples were placed behind a screen, an image of Shin-moo, or the 'Holy Mother,' sitting with a child in her arms, in an alcove, with rays of glory around her head, and tapers constantly burning before her." Rev. Joseph B. Gross, *Heathen Religion*, 60, quoted in *Bible Myths*, p. 327.

In ancient Mexico,

"The Virgin Chimalman, also called Sochiquetzal or Suehiqueal, was the mother of Quecaleoatl, [evidently the same as Quetzalcoatl, who was crucified as a Saviour for the Mexicans, as Jesus was for the Christian world.] In one representation he is shown hanging by the neck holding a cross in his hands. His complexion is quite black. Sochiquetzal means the *lifting up of roses*. [This is really our Sukey, and the Greek ψυχή, Psyche, which means the soul, and which was appropriately applied to the bride of the spirit-lover, Cupid.] Eve is called Ysnxtli, and it is said she sinned by plucking roses. But in another place these roses are called Fruta del Arbor. [arbol?] * * * * *

"The Mexican Eve is called Suchiquecal. A messenger from heaven announced to her that she should bear a son, who should bruise the serpent's head. He presents her with a rose. This was the commencement of an Age, which was called the Age of Roses.

[Is this the age when angels became the husbands of pure-minded women—an age fitly symbolized by the rose, the flower of perfect love? Note, also, the resemblance between this tradition and the Christian tradition, concerning the angel's offering Mary a lily-branch at the Annunciation. Evidently, these are two different aspects of the same symbolism.]

Higgins, continuing, says:

"All this history the Monkish writer is perfectly certain is the invention of the Devil," and Justin Martyr strove to account for the analogy between the story of Christ and the story of Bacchus by supposing that demons had imitated the Christian Scriptures in advance, so totally unaware was he that both stories had the same esoteric meaning to the initiate. "Torquemada's Indian history was mutilated at Madrid before it was published. Suchiquecal is called the Queen of Heaven. She conceived a son, without connection with man, who is the God of Air * * * *

"The Mohammedans have a tradition that Christ was conceived by the smelling of a rose." *Anacalypsis* II. 32, 33.

In the Finnish epic of the Kalevala there is a heroine by the name of Mariatta (from Marja, "berry") who becomes pregnant through unwittingly eating a berry—the berry here playing a similar part to the rose referred to above in the Mohammedan tradition. She goes from one to another person, vainly seeking a place in which to bring forth her child. At last she is referred by one household to the stable of "the flaming horse of Hisi;" and she then appeals to the horse of Hisi in the following words:

"Breathe, O sympathizing fire-horse,
Breathe on me, the virgin-mother!
Let thy heated breath give moisture,
Let thy pleasant warmth surround me,
Like the vapor of the morning;
Let this pure and helpless maiden
Find a refuge in thy manger!"

Observe that, although the mother of an illegitimate child, she, like all the mothers of such children when their father is divine or mysterious, is "pure," the "virgin-mother," etc.

These virgin-mothers are not copies of the Christian Mary Most, if not all of them, were known long before the days of Christianity.

The mother of the Siamese 'Somona Cadom' was impregnated by sun-beams, another form of Danae's golden shower. She was called Maha Maria or Maya Maria, i. e., "the Great Mary." And this brings out some curious coincidences in name among virgin-mothers. Thus:

Marietta of the Kalevala has already been referred to above.

The mother of Hermes or Mercury was Myrrha or Maia.

Maya, the mother of Buddha, is identical in name with the Hindu goddess Maya, who is represented as walking upon the waters, with her peplum teeming with animals, to show her fecundity. Maya is also a well-known Hindu term for "illusion."

The month of May (so nearly like the name of Maia) was sacred to some of the virgin-goddesses of ancient times, as it is now to Mary, the Mother of Jesus. The Christian Virgin Mary was also called Myrrha; and she is still called Santa Maria in Southern Europe and in Mexico. The title bestowed on her of "Star of the Sea"—a title given to the Egyptian Virgin-mother, Isis, perhaps two thousand years earlier—shows how close a resemblance tradition and folklore have traced between both of these virgin-mothers and the ancient genitrix of the waters. Also, the Latin "mare" and the French "mer" for "the sea," and the French "mere" for "mother" bear a striking resemblance to the name Mary in sound. And Venus was born from the foam of sea presiding divinity of love between the sexes. She is credited with having been "indulgent Venus" to a mortal man—Anchises, to whom she bore the hero of Virgil's *Aeneid*, a Borderland espousal, this though here it is the wife and not the husband who comes from the invisible world.

The Apocryphal Gospels speak of the Virgin Mary's being brought up as an orphan, in the temple, and they refer to her as an obedient and pure-minded maiden, accustomed to holding daily converse with angels. That she should have been called by the same root-name as these ancient virgin-mothers, is, therefore, the less remarkable, if we consider the possibility of her having been trained in the temple by the priests as an initiate in the sacred mysteries, and of her having passed the various ordeals so successfully as to entitle her to be called by the name sacred to the type of womanhood accounted worthy to sustain marital relations on the Borderland.

In some cases it would appear that ambitious princes or other designing politicians of ancient days did not scruple to avail themselves of the current belief in the possibility of divine paternity, when it would serve their purpose. It was an open secret among the Greeks that Alexander the Great had not hesitated to do this, on the occasion of his march into Egypt and Suria. When the oracle at the temple of Jupiter Ammon (doubtless for a bribe) declared Alexander to be the son of Jupiter, saying that this god, in the form of a serpent, had manifested to Alexander's mother.

The serpent is, in ancient sex worship, a well-known symbol of the phallus, and therefore, of the creative fatherhood. It appears in several stories of divinely begotten children.

Scipio Africanus was another politician who availed himself of the popular belief in these matters, it would seem. "There is no doubt," remarks Higgins in his *Anacalypsis*, I, 212, 213, "that he aimed at the sovereignty of Rome, but the people were too sharp-sighted for him." A. Gelline says, 'The wife of Publius Scipio was barren for so many years as to create a despair of issue, until one night, when her husband was absent, she discovered a large serpent in his place, and was informed by soothsayers that she would bear a child. In a few days she perceived signs of conception, and after ten months gave birth to the conqueror of Carthage.'²

The Emperor Augustus was said to have been the result of a mysterious connection of his mother with a serpent in the temple of Apollo.

Ovid in his *Fasti* records a story that Servius Tullius was a mysterious shape, claiming to be a vulcan, which appeared to the mother, Ocrisia, among the ashes of the altar, when she was assisting her mistress (Ocrisia was a captive) in the sacred rite of pouring a libation of wine upon the altar.

Pythagoras, who lived more than five hundred years before Christ, was said to be the offspring of Apollo. He was born on a journey, his father (or rather, his mother's earthly husband) having traveled up to Sidon on business. Pythais, the mother, had been beloved by a ghostly personage who claimed to be the god Apollo. Afterwards this same apparition showed itself to the husband, informing him of the parentage of the coming child, and bidding him to have no connection with his wife until after its birth.

A similar event is said to have transpired in the case of Plato, Apollo his father also. His mother was Perictione, a virgin, who was betrothed to one Ariston at the time. In this case, also, Apollo appeared to inform the earthly lover of the child's paternity. Higgins, relating this tradition, adds:

"On this ground, the really very learned Origen defends the immaculate conception [Higgins evidently refers not to the Roman Catholic Doctrine of Mary's stainlessness by that term signified, but to the conception of Jesus] assigning, also, in confirmation of the fact, the example of Vultures (Vautours) who propagate without the male." (! !)

The Vulture was an accompaniment of Hathas, the Egyptian Venus; and it would therefore seem as though Origen had unwittingly stumbled on a bit of folklore. Graves, in his *Sixteen Crucified Saviours*, remarks (I know not on what authority, but give his remark rather for its suggestiveness than as a vouched for historical fact):

"Many are the cases noted in history of young maidens claiming a paternity for their male offspring by a God. In Greece it became so common that the reigning King issued an edict, decreeing the death of all young virgins who should offer such an insult to deity as to lay to him the charge of begetting their children."

"The vestal virgin Rhea Sylvin, who bore Romulus and Remus to the god Mars, is well known. It is a curious co-

incidence that the name Rhea, which was one of the names of the Mother of all the gods, is applied by one writer to the Virgin Mary who likewise became the 'Mother of God'."

The Mongolian conqueror, Genghis Khan, and his two twin brothers were said to be the result of an occult union of the earthly mother with a mysterious intelligence.

"His mother having been left a widow, lived a retired life; but some time after the death of her husband, * * * * she was suspected to be pregnant. The deceased husband's relations forced her to appear before the chief judge of the tribe, for this crime. She boldly defended herself, by declaring that no man had known her; but that one day, lying negligently on her bed, a light appeared in her room, the brightness of which blinded her, and that it penetrated three times into her body, and that if she brought not three sons into the world, she would submit to the most cruel torments. The three sons were born, and the princess was esteemed a saint. The Moguls believe Genghis Khan to be the product of this miracle, that God might punish mankind for the injustice they had committed." *Anacalypsis* II. 353.

Of the conqueror, Tamerlane, who claimed direct descent from Genghis Khan on the mother side, it is related that he was the result of a connection of his mother with the God of day.

Dean Milman says, in his *History of Christianity* (Bible Myths, p. 119.)

"Fo-hi of China—according to tradition—was born of a virgin, and the first Jesuit missionaries who went to China were appalled at finding, in the mythology of that country, a counterpart of the story of the Virgin of Judea."

But, had those same Jesuit missionaries apprehended the idea which lies back of both stories—the substantiality of the unseen world beyond the grave and the possibility of marital relations on the borderland of that world and this, they would not have been thus "appalled." Mother of Confucius, says one tradition, when walking in a solitary place, was impregnated by the vivifying influence of the heavens.

The Chinese philosopher, Lao-Tse, born 604 B. C., the founder of the Religion of the Supreme Reason, was said to

have been born of a virgin of a black complexion—a forerunner this, by hundreds of years, of the Black Madonnas in the Italian Churches.

Do those black Madonnas typify, mystically, the darkness of the unknown world beyond the grave whence the Heavenly Spouse emerges?

The Earls of Cleave were said to descend from a union between the heiress of Cleave and a being from the upper air, "who came to Cleave in a miraculous ship, drawn by a swan, and after begetting divers children, 'went away at Noon-day, in the sight of a World of People, in his Airy Ship.' "

The famous Robert le Diable, according to one tradition, was the child of an incubus.

The enchanter Merlin "son of an incubus and of a holy woman, became the center and the master of all nature," says Peyrat * * * * * (The Magic of the Middle Ages, Rydberg, 204,) the number of those adventurers during the Middle Ages who asserted themselves or others to be the bastards of devils and human beings. But if they had led a blameless life, evincing a firm belief in the dogmas of the Church, the danger of such a pedigree was not greater than the honor. The son of a fallen angel did not need to bend his head before a man of noble birth.

"But," it will be objected, "these stories are myths of ancient, or at most, mediaeval times. You don't find virgin-born children nowadays."

Stay:

In the establishment of Schweinfurth, that individual in Rockford, Illinois, who today claims to be the Christ, a woman a few years since bore a child, and steadfastly declared her belief that it was immaculately conceived. Trial it is said, before a jury of the women of Schweinfurth's establishment did not succeed in shaking the faith of these women in the possibility of such a thing.

In the Truthseeker of New York occurs this paragraph:

"Mrs. Helen Fields, of Wichita, Kansas, has given birth to a child whose father she avers is the Holy Ghost."

Moncure D. Conway, in his Demonology and Devil-Lore, II. 231, says:

"When in Chicago in 1875, I read in one of the morning papers a very particular account of how a white dove flew into the chamber window of a young unmarried woman in a neighboring village, she having brought forth a child, and solemnly declaring that she had never lost her virginity."

It is, of course, easy to dismiss all these stories, ancient, mediaeval and modern, with contempt, as so many falsehoods, or, at best, self-delusions. I have already said that, despite the immense number of traditions and 'miraculous births,' I doubt if such ever occur upon the borderland of the two worlds, owing to certain occult principles to which I shall briefly refer further on. Nevertheless this mass of folklore belief is too overwhelming in quantity and too widely diffused to be dismissed lightly. Back of it all there must be some objective realities and some fire for all this smoke. And we must not forget that there is one miraculous birth which is accepted throughout Christendom—the birth of Jesus from a Divine Father and an earthly Virgin-Mother. Nevertheless by the cultured heathen opponents of Justin, the story of the divine paternity of Jesus seems to have been regarded with a scorn similar to that with which we regard the above tales today, and that Church Father showed his wisdom when he placed heathen and Christian stories upon the same logical basis.

Am I not right in saying that to impugn the possibility of marital relations between earthly women and heavenly bridegrooms is to strike at the very foundations of Christianity?

In folklore customs and fairy tales, fantastic though these may be, we find numerous indications of the world-wide belief in bridegrooms and brides from the unseen world of spiritual beings, or, as they were termed in the middle ages, incubi and succubae. (Latin, *incubo*, "to lie upon;" *succubo*, "to lie under."

We may set out with that description among the islanders of the Antilles, where they are the ghosts of the dead, vanishing when clutched; in New Zealand, where ancestral deities 'form attachments with females, and pay them repeated visits;' while in the Samoan Islands, such intercourse of mischievous inferior gods caused 'many supernatural conceptions;' and in Lapland, where details of this last extreme class have also

been placed on record. From these lower grades of culture the idea may be followed onward. Formal rites are specified in the Hindu Tantra which enable a man to obtain a companion—nymph—by worshiping her and repeating her name by night in a cemetery.³

Among the Metamba negroes, a woman is bound hand and foot by the priest, who flings her into the water several times over with the intention of drowning her husband, a ghost, who may be supposed to be elinging to his unfeeling spouse. T. F. Thiselton Dyers, *The Ghost World*, p. 182.

In China, it is not considered respectable for widows to re-marry, for the express reason that their husbands are expected to return to them from the world beyond the grave and resume marital relations with them upon the Borderland.

In the case of widows it would appear to be but a resumption of a relation previously established between the two upon earth. And there are indications that the same stress is not laid upon passing preliminary ordeals as is the case with the virgin, who "has never known man." May it not be because of the virgin's greater ignorance, physiologically speaking, so that she has to enter upon a more extended course of training than does the widow, who already has experience?

The myths and fairy tales which speak of maidens with mysterious lovers from the realm of the unseen are certain to contain, so far as I have observed, reference to some rule or pledge which the woman must strictly observe. If she fails to do this, her lover vanishes, and she can find him again only after passing long and toilsome ordeals. Such was the case with Psyche, who broke the command of her heavenly lover, Cupid, not to look upon him while he slept. He had come to her night after night in the darkness, unseen, as is the wont with so many of these heavenly bridegrooms; and she naturally desired to see his face. But, in her eagerness to know him more intimately, she let fall a drop of hot oil from the lamp upon him, which awoke him, and he vanished. This myth is an evident euphemism for a broken law of marital self-control. In other words, she wanted to enter upon the second step in the occult training which she was receiving from her husband,

before she had fully mastered the first step. What those steps were—first, second and third—(for there is a third) through which the earthly wife of a heavenly bridegroom must pass, will appear further on in this book.

TO BE CONTINUED.

1. His mother Danae was said to have been imprisoned, while yet a virgin, in a high tower, that she might have no children. Jupiter, however, visited her manifestly as a shower of gold, and Perseus was the result of the union.

2. Ten lunar months, 28 days presumably, meant here.

3. Tylor, "Prim. Culture," 3rd Ed. 1891, II, 189, 190. (Ward, "Hindoos," Vol. II, p. 151. See also Borri, "Cochin China" in Pinkerton, Vol. IX, p. 823.)

SELECTIONS

CLINICAL NEUROLOGY

THE CAUSE OF CHOREA COMPLICATING PREGNANCY.—Albrecht (*Ztschr. f. Geburtsh. u. Gynak.*, 1915, lxxvi) describes the case of a primipara aged twenty-two years, who was taken with chorea at the beginning of the first pregnancy. Her condition became pronounced and she was treated by intragluteal injection of 20 c. c. normal pregnancy serum. In twenty-four hours the choreic movements had ceased and the patient was much better. She also gained somewhat in weight. He adds the case of a girl, aged sixteen years, in whom chorea appeared at the time when menstruation became established. From the study of these cases he believes that chorea is an intoxication in the pregnant patient with substances formed by the embryo, or in patients at puberty with substances produced by the glands which form the internal secretions.

GOITER.—According to symptoms, goiter cases easily fall into three groups: In the first group we have the symptoms of toxemia and underoxidation. This group is composed of the early cases before the augmentor and inhibition apparatus have lost their balance and damaged the circulation. However, a low grade of endocarditis is always present. In the second group are those cases usually called exophthalmic. In these cases we have tremor, weakness, exophthalmos, thyrotoxis, tachycardia and hypertension. In the third group, no tachycardia, no increase in the blood pressure, but we have the same toxic symptoms of depression, tremor, cold skin, sweating, etc., and usually pronounced mental and emotional symptoms, with a slow pulse and dull eye.—Edwin B. Sloan in *The Chicago Medical Recorder*.—*N. Y. Med. Record*.

LATENT NEUROSYPHILIS AND THE QUESTION OF GENERAL PARESIS—SINE PARESI.—Southard and Solomon (Boston Med. and Surg. Jour., Vol. CLXXIV, No. 1), report four cases in which the laboratory findings were those of general paresis, without any definite clinical picture. They believe that general paresis can be diagnosed from the blood and spinal fluid findings before the mental symptoms develop. They place these cases under the great group of neurosyphilis. Each case gave:

- (a) Positive Wassermann in blood serum;
- (b) Positive Wassermann in spinal fluid;
- (c) Pleocytosis fifty-five or more cells in the cu. mm. in spinal fluid;
- (d) Excess of globulin (Nonne-Apelt test);
- (e) Excess of albumin (Mestrezat test);
- (f) Colloidal gold reaction consistent with neurosyphilis.

These cases naturally must be regarded as syphilitic, even though the presence of the spirochetes has not been demonstrated. It would seem that the process is an active one and might be termed chronic inflammation. The chemical changes in the spinal fluid point to some phase of neural degeneration, either acute, subacute or chronic.

The authors do not believe that the presence of 100 cells in the spinal fluid indicates non-paretic neurosyphilis, and that 4 to 100 cells indicate paresis, for a single case has shown a variation of from 4 to 200 cells. However, they feel that a relatively large number of plasma cells in the spinal fluid strongly suggests paresis rather than non-paretic lues. The colloidal gold curve is characteristic of paresis. One of the four cases gave such a curve, the other three yielded curves of the same general form but not so intense. They feel that undoubted cases of paresis exist with definite laboratory findings, without any clinical manifestations of paresis, and classify these cases as non-paretic paresis. Their four cases are reported in detail, both from the clinical and the laboratory standpoint. The authors feel that if treatment is begun

sufficiently early and thoroughly, the outbreak of paresis may be checked. Fournier holds a similar view. They arrive at the following conclusions:

1. There is a group of cases showing the laboratory signs characteristic of central nervous system syphilis; (a) positive Wassermann reaction in serum; (b) positive Wassermann reaction in spinal fluid; (c) pleocytosis; (d) excess of globulin, and (e) of albumin in the spinal fluid; (f) gold sol reaction of central nervous system syphilis, and which show no sign or symptom of neural syphilis.

2. The authors believe these cases represent a form of chronic cerebro-spinal syphilis, probably parietic in type.

3. They have the greatest theoretical and practical significance in the consideration of the life history of neural syphilis, on the concepts of allergie, in regard to results of treatment, and finally as to the evaluation of the laboratory tests.

4. Here is offered the last link to form a complete chain between the symptoms of the primary state of syphilis and its final termination of life as the result of the diseases, cerebro-spinal syphilis or general paresis.—*St. Paul Med. Jour.*

NEUROTHERAPY

CALCIUM IN EPILEPSY.—Dr. John Bryant, in *Boston Medical and Surgical Journal*, October 7, 1915, after discussing the metabolism of calcium, asserts that the diet is very apt to be deficient in calcium. Analyses of brain substance have demonstrated the presence in this tissue of less than the normal amount of calcium, in certain disorders marked by hyper-irritability of the nervous system. The osseous systems of epileptics are thought to be deficient in calcium. Calcium has been used successfully in explosive conditions like tic and tetany. Then why not epilepsy?

Using the official syrup of calcium lactophosphate in doses of one or two teaspoonfuls three times a day, and in many cases, the writer reports it to be quite effective in the *petit mal* type, reducing nervous irritability and improving the general condition of the patients. But nearly all types of epilepsy have shown some benefit from the syrup, and Dr. Bryant is encouraged to continue his trial of this drug in all types of explosive neural manifestations.—Medical Council—Therapeutic Digest.

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NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

CHAS. H. HUGHES, M. D., Editor and Publisher.

H. L. HUGHES, MANAGER.

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EDITORIAL

NECESSITY FOR MEDICAL EXAMINATION OF PRISONERS AT THE TIME OF TRIAL. THE RELATIONSHIP OF INSANITY TO CRIME.—There is very adequate excuse for presenting an address of this title. Evidences of the gross miscarriage of justice and of the inadequate protection afforded the public are to be found in every penal institu-

tion of this country. I wish it to be understood as a preface to my remarks, that what I have to say, is devoid of maudlin sentiment and the chief purpose that I have in mind is the protection of the public from the individuals who offend society and violate her laws by reason of deliberate viciousness, or from social or economic determinism, or because of mental unsoundness.

Every year society is unjustly sending to prison hundreds of insane and feeble-minded persons who in the course of their mental disturbances have violated the penal laws. And this culpable practice of punishing the mentally sick in penal institutions should "in the course of justice," cease.

Society is being poorly protected when it sends insane and mentally defective individuals to penal institutions and then releases them uncured, from custody, merely because their sentences have expired. Yet this irrational procedure is being practiced continuously by our courts and boards of parole in all the states of the union.

Up to the present time, far more attention and consideration have been given to the legal classification of crime and to its various modes of punishment, than have been given to the criminal himself.

Probably fifty per cent of all juridical proceedings are concerned with criminality, and yet our jurists placidly and contentedly continue to study their books instead of men, searching in ponderous and ancient volumes of citations, resurrecting decisions from the legal graveyard of the dead past and with crumbling, moth-eaten and time-worn precedents, they attempt to regulate the anti-social conduct that springs from a disordered mentality.

Let us briefly survey the results of committing insane and mentally defective individuals to prison. When a defective delinquent has been discharged or paroled from custody merely because he has spent a certain time in prison he returns to society a more defective and viciously inclined individual than he was previous to his incarceration

and it is almost certain that he will return to prison on a new charge, and the same foolish experiment with all its attendant expense will be repeated.

In a recent study that I made of one hundred recidivists, all of whom had been convicted not less than four times, twelve of them were insane, twenty-three were feebleminded, ten were epileptic, and in each instance the mental defectiveness bore a direct causal relation to their crimes. No less than one hundred and eighty trials have been held for these persons; it is reported by good authority that it costs no less than one thousand dollars to convict a prisoner, so at this rate the lowest possible expense to the commonwealth was one hundred eighty thousand dollars. And, four times each one of these defective individuals had been released to prey upon society and no permanent good whatsoever has been accomplished.

The presence of insane persons in penal institutions is extremely detrimental to discipline for they cannot be punished as a normal prisoner should be, because of their defective sense of responsibility, and advantages are taken of this humanitarian leniency by the more intelligent prisoner to commit offences against the rules. No less than seventy-five per cent of the men who appear before the disciplinary officer of the Indiana State Prison are mentally defective.

What have been the reasons that this outrage has been permitted to exist as a blot upon the escutcheon of our social justice? Why have we stigmatized mentally sick individuals as criminals? The answer is to be found in our ignorance of the psychology of crime, in the spirit of *laissez faire* of the legal fraternity who have always been exceedingly slow to eradicate the evils of our legal procedure and who have sought the protection of bristling, misleading technicalities and that much abused legal phrase "constitutional rights," when legal reforms have been imminent. While admitting that the constitutionality of any legal procedure must be determined, it is at once appreciated by every fair minded person that all social

reforms of a legal nature have met with serious opposition, possibly because these suggested changes have been thought, at least for awhile, to be too radical and revolutionary.

Since these mentioned ills and many others attend our criminal law practice, the question at once arises, what shall we do in the matter? It is at once apparent that our defective methods of dealing with prisoners spring from a number of various causes which are complexly related and no single remedy that might be offered will be a panacea for the relief of them, but I am of the firm belief that the medical and psychiatric examination of all prisoners at the time of trial, would go a long way in the solution of the vexing criminal problems.

Under no circumstances should there be any attempt to abridge the right of trial or for the court physician to usurp the authority of the judge or jurors, but it is obviously apparent that the court should be supplied with scientific data concerning the alleged criminal.

The facts of the violation of law should be first carefully determined by the court and the report of the medical investigation be submitted to the judge before sentence has been pronounced, except in those cases where the alleged criminal is so manifestly insane that he cannot in the least comprehend that he is being tried. This information would furnish the judge and court with the knowledge that would enable them to more accurately decide whether the individual should have a suspended sentence or be sent to prison, to a hospital for the insane or placed in the hands of a probationary officer.

It is well understood that such a change in our criminal methods would be met with a storm of protest from our legal friends. They very probably would consider such a change extremely idealistic and impracticable; that it would interfere with the functions of the jury and that the right of the defendant to employ witnesses would be curtailed and upon casual consideration, these objections seem to be valid and logical. But when we reflect that the real purpose of the law is justice and truth

and not the preservation of hairsplitting technicalities, we cannot hold these objections to be of great worth.

The medical examination of prisoners would correct in a large measure the evils that attend the employment of medical experts. Much of the criticism which is unjustly and malignantly heaped upon the qualified and honest psychiatrist would be done away with and many of the unqualified practitioners, who are posing as mental experts and thereby bringing ill repute upon the medical profession, would be eliminated from court practice. It is the height of medical absurdity to permit a general practitioner who is without knowledge and experience in psychiatry to give opinions and statements in courts which are likely to affect the life or liberty of an individual. Our present method of employing expert testimony is productive of but little good and a great deal of harm. Our present system makes the alienist an interested party to the issue in question and it is exceedingly difficult for the alienist, no matter how well qualified and honest, to give testimony that is entirely satisfactory to his own conscience and to the merits of the case in hand.

Now the physicians are hired by the plaintiff and the defendant and pitted against one another in a wordy battle for the display of wits by lawyers who are skilled rhetoricians, who cunningly and skillfully by the use of dialectics, suppress medical facts dangerous to their own purposes and lay undue stress on non-essentials if they can thereby gain any advantage over their opponents.

Very equivocal hypothetical questions are presented which are often not supported by salient facts and the doctor is required to answer the unproven statements without the privilege of due and careful consideration. The individual of the hypothetical question and the person on trial often seem to bear only the faintest traces of kinship to one another.

To correct some of these wrongs which I have enumerated, the court should appoint a physician who is qualified by training and experience in the science and practice of psychiatry. This physician should be a

part of the personnel of the court and it should be his duty to sociologically, physically and mentally examine every prisoner at the time of his arrest and trial. A careful written detailed report should be made out and presented to the court for the instruction of the judge and jurors. If this were the case, many of the unnecessary trials that are now being held would be done away with and much needless expense would be saved. Under this procedure, the malingerer would be detected and the insanity dodge would become very much less popular. Many of the individuals suffering from the incipient insanities whose crimes are but the expression of mental disease would have their psychical disorders discovered early enough that they might be sent to hospitals for the insane for cure instead of being forced to linger in prison cells, medically neglected and misunderstood.

That the results of the examinations may be accurate, logical, uniform and impartial, a definite outline of examination should be adopted and should be strictly adhered to both in spirit and application. The steps of examination should be as follows:

- a. An accurate family history should be obtained, having a special reference to the inheritance of disease, especially insanity, feeble-mindedness, epilepsy and criminality, together with a careful survey of social conditions.

- b. An accurate personal history of the accused.

- c. An accurate physical and neurological examination of the accused.

- d. An accurate mental examination which should follow the latest methods employed in modern hospitals for the insane and schools for the feeble-minded.

- e. A complete typewritten statement of these findings should be made, including a brief conclusion, diagnosing the intelligence of the criminal, his moral nature, the criminal type to which he belongs and the degree of his dangerousness to society. A copy of this report should be filed with the records of the case in the court where the trial is held and with the State Board of

Corrections and Charities, open to public inspection at any time.

The physician in his routine examination of prisoners charged with crime would find every variety of the essential psychoses and all anomalous psychotic states represented, and, unless the alienated individuals committed crimes of violence and displayed dangerous criminal tendencies, it would be apropos to send these persons to the ordinary hospitals for the insane. The medical examiner would find another class of mentally defective prisoners comprised of the instinctive or born criminals, the dangerous epileptics and paranoiacs, the sexual perverts and the morally insane.

The most dangerous of all insane patients is one who harbors in the recesses of his diseased mentality systematized delusions of persecution. This is especially true of the paranoiac, who many times appears to be intellectually normal and occasionally, aside from his paranoidal tendencies, he may be the superior of the average individual. The proper perspectives of life are impossible for the paranoiac, since each instance and circumstance is colored and tinged by an abnormal sensibility and reaction to the most commonplace and trivial affairs.

The paranoiac in a stage of persecution, out of the most insignificant circumstance, constructs a nebula of persecutory ideas which are intangible and obscure. Finally these hazy, indistinct ideas of persecution take on a more definite character, and then step by step, supportive and contributive ideas are formed and elaborated which build up a definite, systematized, delusional preconception or system of thought through which must pass every idea that is translated into action.

This delusional formation is so closely and intimately connected with the whole of consciousness, that it regulates and dominates the individual's manner of feeling, thinking and acting. It is easy to see therefore that any paranoiac is a potential homicide while harboring delusions of persecution. Should he believe that his supposed enemies have designs upon his life, or that they desire

to make him the butt of their ridicule, or the object of some diabolical conspiracy, it is not at all strange that the persecuted should turn persecutor.

The types that have just been mentioned should not be confined in the ordinary prisons nor should they be sent as unwelcome guests to mingle and associate with the ordinary innocent and non-dangerous insane. These types of mentally defective prisoners are the fire brands of insubordination and mutiny and they are a perpetual menace to the discipline of any institution and possibly to the lives of institutional officials.

"To confine them in common asylums would be * * * * injurious, for they preach sodomy, flight, and revolt and incite the others to robbery, and their indecent and savage ways, as well as the terrible reputation which often precedes them, make them objects of terror and repulsion to the quieter patients and their relatives, who dread to see their kin in such company."

The medical examination of prisoners would make it necessary for every penal institution to have a psychopathic department, in those states which are without a separate hospital for the criminal insane, for the care of those persons charged with crime who are found insane at the time of trial, and for those prisoners whose state of mental enfeeblement makes it impossible for them to adjust themselves with safety to all concerned, to the routine of prison life. This conception of providing an institution for this class of irresponsible offenders against the penal law is slowly permeating the social conscience and there are now about twelve such institutions in the United States. Our country has been extremely slow in recognizing the need of such institutions and the honor of establishing them belongs to England. A department for the special care of the criminal insane was instituted in 1786 at the Bedlam Asylum. Later in 1850 another one was instituted at Dundrum, Ireland. In 1858, such an institution was set aside at Perth, Scotland, and the famous Broadmore Hospital came into existence in 1863.

The individuals sent to the hospitals for the criminal insane should remain there until they cease to be a source of danger to be at large. Their period of incarceration should be permanent unless a cure was effected. It goes without saying that these hospitals or psychopathic annexes to prisons should be in the control of alienists who have had experience in the care of prisoners as well as the insane.

The law governing the commitment of persons to a hospital for the criminal insane should be so constructed that its constitutionality cannot be questioned. It should be so drawn what while the individual prisoner will receive all due protection, society will also be protected from the person mentally responsible, but who seeks to evade the responsibility of criminal acts by a plea of insanity. The law on this subject should embrace the following principles: If it should be found by the court alienist that the alleged criminal was suffering with insanity at the time of the commission of his criminal act and by reason of his mental unbalance the criminal intent to commit a crime was lacking, he should not be convicted or punished, but he should, for the safety and welfare of society be confined in a hospital for the criminal insane until his sanity is so restored that he would no longer be dangerous and not until then. Or, if it should be found by examination that the defendant had been insane at the time of the commission of his dangerous act, but that he was sane at the time of trial and that a recurrence of his insanity is highly probable, he should be committed to a hospital for the insane criminals for a long period of observation and treatment.

In order to further safeguard the integrity and to guarantee the reliability of the medical examination of prisoners which has been advocated in this paper that it may be thoroughly scientific, reliable and fair, the court alienists must be chosen from a qualified group of physicians, who by reason of their training, experience and integrity, are fitted for this important work. Political influence must be absolutely barred in the selection of official

experts that the desired end may not be frustrated. The individuals eligible to appointment should be designated by the state medical society.

If medical examination of prisoners was instituted as a matter of routine practice in our criminal courts, a very material improvement would follow for the following reasons:

a. The ordinary insane persons would be separated from the usual class of criminals and the mentally sick could be given the proper treatment in the proper institutions early in the course of their diseases.

b. The dangerous insane, the morally insane, the sexual perverts, and the habitual criminals would be segregated and sent to hospitals for the criminal insane permanently or until a cure was effected.

c. Prisons would cease to be a dumping ground for all classes of defectives.

d. Society would be very much better protected than it is now, for mental defectives and habitual criminals would not be released to further prey upon the public.

e. There would be an enormous saving of money now uselessly spent in needless trials of incurable defective delinquents.

f. Much valuable data concerning criminalistics would be accumulated that if used would put our criminal procedure on a more rational basis than exists at present.—Paul E. Bowers, M. S., M. D., Medical Superintendent, Indiana Hospital for Insane Criminals, Michigan City, Indiana.

NOTE BY THE EDITOR: The preceding read before the American Academy of Medicine is so pertinent a contribution to our time and so opportune for the consideration of attorneys at law, courts and juries that we give it our best space and editorial approval.

We have been strongly inclined, for the past year or more, to write upon this important subject ourself.

“FORGERS OF LIES—PHYSICIANS OF NO VALUE.” A medical sermonette on quacks and quackery. A brief overflow editorial.

Job's estimate of his "miserable comforters," that they were "forgers of lies and physicians of no value," to whom he sarcastically alluded as being no doubt the last of earth's wise men, at whose demise earthly "wisdom would die," is scriptural characterization of the average newspaper and almanac advice, and commercial medical remedy.

Likewise also, we regret to say of some—too many in fact—of our proprietary medicines not approved by the therapeutic council, A. M. A., for they bring discredit and distrust toward the better class of indispensable and meritorious medical compounds and advices for the help and convenience of physicians.

We would not in this connection be misunderstood, the good proprietaries that do not insult the intelligence of the profession by withholding the composition of their specialties are not to be condemned, for then the doctor may judge for himself the value of a proprietary prescription and may find it more serviceable to his needs than his own extemporaneous one or than his convenience would enable him to compound or than the country pharmacist, if close at hand, might put up or keep in stock. Certain proprietary medicines are as necessary to the country doctor as improved methods of travel are to travelers but this does not apply to all of them or indeed half of them; but such, for instance, as are not infrequently put on the market by drug clerks, book-keepers in drug houses and even soda fountain boys and shrewd all round business men and promoters in other fields.

But to briefly digress and return to Job. His estimate of the "miserable comforters" who tormented him with their censure, were "of the people" who knew it all and they are the ones who make the patent medicine business a possibility, "mostly fools," as Carlyle said of the world's population, after he had scanned the first or near the first authentic universal census; but "mostly fools." "No doubt but ye are the people and

wisdom shall die with you" said Job. (Two great minds with similar estimate of the rabble.)

If the people would but consider the monetary motive behind the wonderfully published statements of the fake cure all of the day how much misery would be prevented and how many deaths avoided that occur from finally fatal maladies caused by patent medicine, taking experimental delay, before seeking real, intelligent medical resource in the curable stages of disease.

FATIGUE POISON (MUSCLE TOXINE) IN COURT.—Lawyers tardily catch on to scientific fact. It was a long time after their discovery in psychiatry till after Priehard and affective insanity, folie eireulaire, reasoning mania, paranoia and similar morbid affections of mind came to light that the "knowledge of right and wrong" court test of insanity, was modified to conform to the facts of brain disease aberration, in which abstract intellectual perception as to right and wrong perception persisted without power of resistance, because of brain disease, before it was finally conceded that such knowledge could coexist with insanity.

Now another physio-pathological fact has penetrated the legal mind, namely as follows: "Basing his appeal upon the latest scientific statements of the effect of fatigue, Louis D. Brandies pleaded before the United States Supreme Court last January in behalf of the constitutionality of the nine-hour law for working women in Ohio, on the ground that the greatest modern scientists prove that fatigue is a poison generated during activity and removed during rest.

When hygienic science gets full possession of capitalist and workman and they both mutually act accordingly as to work time and rest, more efficiency in working output and human happiness will result. This presupposes that workmen will not be fools and not waste their opportunities for healthful rebuild of vital energies in depression and life-abstracting indulgences in alcoholic drinks,

lechery and other dissipations of strength and paralysants of elimination and recuperation.

The human machine does its own repairs. Labor and capital should consider this and give the machine a reasonable physiological chance for repair from day to day and night to night. Rest time is the repair time and this opportunity should neither be denied nor abused by dissipation. It is as imperative as fresh air and clean toilet rooms for the factory.

Big business should be intelligent business in its sanitary aspects. The saving of tone and vigor in workmen is as essential as the intelligent care of inanimate machinery.

THE PRACTICE OF MEDICINE ACCORDING TO MISSOURI LAW.—“Section 8311. It shall be unlawful for any person not now a registered physician within the meaning of the law to practice medicine or surgery in any of its departments, or to profess to cure and attempt to treat the sick and others afflicted with bodily or mental infirmities, or engage in the practice of midwifery in the state of Missouri, except as hereinafter provided.

“Section 8312. The State Board of Health shall have general supervision over the registration of all practitioners of medicine, surgery and midwifery in this state.”

Section 8313, which is extended at some length, provides that all persons who desire to practice medicine as provided in Section 8311 shall appear before the State Board of Health at a stated time for examination: shall furnish certificate that they have passed a grade examination in an accredited school, and shall also furnish satisfactory evidence of having received a diploma from some reputable medical college of four years' requirements at the time of graduation.

The practice of medicine is not confined to the administration of drugs; nor in surgery to the knife.

On these statutory provisions the Supreme Court of Missouri has ruled that making a diagnosis and pre-

scribing medicines or directing change of climate for health constitute practicing medicine.

THAW'S SANITY appears to have been decided by the trial jury not so much on the evidence as upon the prevalent sentiment among them and among the applauding popular jury outside, who felt, to their credit of heart and mind, that the summary killing of the designing, lecherous betrayer of confiding innocence (as Evelyn Nesbit was regarded by them) was a righteous retribution while Thaw at the time he shot White, was at that most eroto impressible age that glorifies women generally and intensely in love with one regards her as the guileless one possessing all the virtues that fancy paints to him in heartfelt mental picture.

That jury believed that the young man had suffered enough for a partly condonable crime. Its verdict was not altogether one of cold calculating scientific conclusion, especially when the conflict of medical expert opinion is considered. Men like him with his life habits ought never to be regarded as less than insanoid with the fated predisposition to morbid brain-storms under alcoholic indulgence and violent provocation.

Yet Thaw says he will never drink inordinately again. He can not drink temperately. The only safety for Thaw in the future is absolute abstinence and the rational bridling of all other passion.

BATTLEFIELD CASUALTIES.—In the figures for the total British losses since the beginning of the war, recently given out by the War Office, the proportion of killed to wounded works out almost exactly in the ratio of one dead for each three wounded. This was for all the forces in all zones and classes of military activity. No differentiation for the casualties in trench warfare has as yet been given out officially, but certain reports indicate that in such warfare about one person is killed to each two wounded. These figures are interesting in comparison with the proportion of 1:4 which had been

accepted before the war, and indicates that the kind of warfare which is being conducted bears directly on the amount and character of transportation and hospital facilities required in the zone of such warfare. Our accepted basis for estimates on the clearance of the battlefield will, like so many other standards, doubtless have to undergo material modification.—Military Surgeon, 1916.

This timely quotation from the Military Surgeon, is very judiciously noted in the Medical Times.

THE "GENERAL PRACTITIONER" is, usually, a member of the best medical societies. He buys the best books. He subscribes to the best journals, and makes enough money to pay promptly for them. He uses the best diagnostic and surgical instruments and prescribes or dispenses the best and most dependable remedies. He wants to know what the leaders in the profession are doing and how they do their work. He is in favor of public sanitation. He stands for high ethical standards. He is a gentleman. He is rationally pro-organization and works heart and soul with his fellows in the profession.

This is the conception of the general practitioner expressed by our worthy contemporary magazine, The Medical Council, in which we concur.

He studies his patient all over and tries to understand him thoroughly. He seeks light from every source, the specialties included, and often searches deeper than some of the specialists and finds contributory morbid conditions which some specialists overlook, especially if the specialist has not first been a general medical practitioner.

THE BIZARRE AND CRUEL HAZING STUNTS of our college classes and army and navy cadets are suggestive of a touch of psychopathic instability in the brains of the originators and instigators of this cruel and often perilous anti-Golden Rule, foolish disregard of the pleasure, comfort and peace of others.

A propensity to hazing suggests a slight moral screw loose in the mental composition of the original hazer and ought to be considered in the matter of the hazers' promotion and future.

A record at college or high school as a hazer ought to be considered by college faculties and trustees as a demerit and hereditary mental defect and a relic of barbarism or infantilism like the habit of boys who torture animals without cause and not more dignified than the habit of tying tin cans to a trusting pet dog's tail just to see the dog run from fright.

INDOL, THOUGH THE LEXICOGRAPHERS have not so classed it, is allied to indolence. Indol absorbed into the blood from large and torpid intestines as the product of bacterial putrefaction, is harmful to brain and muscle. If not speedily eliminated by the kidneys it produces brain and muscle fatigue and other toxine results.

Dr. Darlington, late New York Health Commissioner and now Secretary to the Welfare Committee of the American Iron and Steel Institute, in an article on Sanitary Welfare of Workers aptly quotes from Professor F. S. Lee of Columbia University on this subject, whose fatigue records show that an electrically stimulated muscle into which indol has been injected loses more than half of its efficiency. Thus science, law, the interests of big business and the welfare of labor go together.. They are, or should be, reciprocal and harmonious.

NATIONAL EUGENICS.—The revelation since the beginning of the present European war of the preferred attachment for the fatherland and motherland of many of our naturalized fellow citizens to whom the term of hyphenated Americans has been applied, suggests that our fathers were right in fixing a longer term of pre-naturalized residence for aliens before granting a full American citizenship privileges to a good many of them.

Less than eight years residence in this country does not seem long enough to wean many of them from their

predeliction for their old monarchical nativities. They would not likely be safe citizens for us in time of war with their native country. Our immigrants are many of them babies as to the genius of American true freedom as distinguished from license and also from a sanitary and American fellowship point of view.

THE IMPROBABLE DISCOVERY OF A BACILLUS EPILEPTICUS is announced by our friend, Dr. Chas. A. Reed, of Cincinnati.

Dr. Reed thinks the native home of this bacillus is in the soil, like that of tetanus.

We have seen epilepsy develop from too many sources to accept this new etiology statement as a verity, viz., acute alcoholism, psychic shock, cerebral traumatism and grave neurosis.

OBITUARY

THE DEATH OF DR. AMOS SAWYER, an old medical classmate of the editor of this magazine and once a meritorious writer for its pages, is a source of grief to us and an event of regret to the people of Hillsboro and Southern Illinois. He was an able, devoted and successful practicing physician of his section for half a century and withal a public spirited citizen. He wrote many articles of medical, of philosophic and literary merit. He was, in every respect, a good physician and a worthy and true friend. He was born at Boston in 1837 but his life was mostly spent at Hillsboro, Illinois—since 1842.

In his student days Dr. Sawyer showed his scientific investigating disposition by establishing a toxicological experimental laboratory and selected the writer, who was then only a first course student, as his assistant. Among the articles experimented with and on were the arsenicals, strychnine and prussic acid, etc. The victims were stray cats, dogs and rats, etc., well remembered to this day.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE NUTRITION OF PULMONARY TISSUES.—It is generally recognized that the best chance of securing results in chronic diseases of the bronchi and lungs is afforded by an agent that supplies nourishment to these tissues, and for such a purpose Cord. Ext. 01. Morrhuæ Comp. (Hagee) will give the utmost satisfaction. It contains the essential qualities of cod liver oil, but is free from its nauseous properties, for which reason it should be selected whenever cod liver oil is indicated.

OFFICIAL RULES of the Council on Pharmacy and Chemistry of the American Medical Association. Outline of information required by the Council concerning articles proposed for inclusion in new and nonofficial remedies. October 1, 1915. Valuable information for physicians and proprietary pharmacists. If any foreign corresponding members are retained on the membership of this Council we suggest that they be more liberally distributed. One London and two German members appear too narrow.

THIS IS AN INTERESTING REVIEW of the early vaccination controversy with an original letter, Jenner referring to it, and to the spread of vaccination to the Spanish possessions of America, the Philippines, and European settlements in the Orient. With commemorative monument in Manila on the subject. By Philip King Brown, M.D., San Francisco Polyclinic. From the California State Journal of Medicine, May.

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AUDITORY HALLUCINATIONS IN A DEAF INSANE PATIENT

By CHESTER H. KEOGH, B. A., M. D.,
Chicago, Illinois.

THE story of the case which follows is not incorporated in the reports of any psychopathic clinic. In the days when the person, of whom I shall speak, was under observation, there was no clinic of the kind in the country.

She was one of many patients within the walls of a well-conducted hospital for the treatment of insane patients, where an individual was but a small unit in a multitudinous host, meriting, if not always receiving, continuous professional attention. How long she had been a resident of the institution, or by whom she had been examined upon admission, were details of history no longer within the memory of the immediate staff of nurses upon duty, and the records were at the time not at hand nor readily available. I had seen her during a period extending over many months while interested in the observation of other patients.

It is a mistake, I believe, confined not altogether to lay minds to suppose that in an institution of this kind an atmosphere of Bedlam eternally prevails, and that noise is an essential element, constantly found, in the home of those whose shattered lives are passed under constant surveillance; but nothing is further from the truth. Times there are, when, as in the neighborhood of a hive of working bees, one hears but the hum of industry or there prevails

the quiet of perfect peace. Noise, too, there is upon occasions: Discordant, inharmonious cries, conversation in highly pitched keys, songs out of tune, curses, prayers as well. But these sounds fall upon one's ears usually night and morning, like the vesper and matutinal chattering of sparrows, which the poet, Rostand, incorporated within his comedy as the litany of the little birds. For the borderland state between sleeping and waking—a span of the great subconscious—which, for aught we know to the contrary, obtains throughout the animal kingdom, and wherein so many psychic phenomena are wont to occur, and by the aid of which one may explain so much, and without which so many psychic happenings one never could well understand, is the time of unrest among these patients.

It was at a quiet period I first saw her. She sat at her embroidery frame, giving to a centerpiece of surpassing taste and beauty, the last perfecting stitches. It was the effect an artist strives to attain, this burst of blended silken colors upon a background of ancient linen. In passing, I ventured a compliment upon her handiwork, just a few words. She did not look up or smile or even answer. I was told by a nurse she never answered. No one about remembered to have heard her speaking. The interne really did not know much about her. Her trouble was difficult of diagnosis, as she was taciturn.

Of her personal appearance there is the memory of a well-preserved, comely woman of about forty-eight or fifty years of age, scrupulously neat as to her clothing—an air of distinguished respectability, and of self-satisfaction in the way she wore it.

It was only after an interval of some weeks that I again addressed her. Then I handed her a card, upon the back of which was written this communication: "Why, may I ask, do you never speak? Are you unable to do so?" She took a pencil and paper and wrote: "I am able to speak if I wish to do so." I asked why she had not spoken to me instead of writing. She replied in a soft, clear, well-modulated voice, "Because I am deaf. One takes no pleasure or satisfaction in conversation under such conditions, and

besides—these people—I feel as if it would not be right to disturb them.”

I wrote another note to the effect that such consideration for her companions was most praiseworthy and to quote her again, but not verbatim, she answered that she did it the more willingly because she herself could wish at times to be freed from a like annoyance. Her husband, who was an officer in the King's Army—General X.—lived just vis-a-vis in an adjacent building, and he was a great source of annoyance to her, as he was always shouting to her.

Before I left the institution I sought and obtained definite information. Her name was Miss B.——. She had never married. So I wrote in my notebook for future reference:

Auditory hallucinations—delusion of perscution—dual personality—deafness.

The observation of auditory hallucinations in deaf insane patients is no new discovery. It was known probably to the ancients and was pointed out, as a condition found at times in the asylums of France, over a hundred years ago.

Yet, musing upon this paradoxical case history, I determined to ask permission at my next visit to the hospital to make further study of the patient and, if possible, cause to be put into operation a line of treatment which, therapeutically speaking, one may consider a bit unusual.

I thought to make the defect of her hearing the means by which her mind should be freed from her auditory hallucinations.

The permission sought was readily granted, and the more freely upon this account. In the laundry of the institution there had been no little confusion caused in the sorting of the patients' linen by the fact that all the garments of Miss B. had been marked (by herself) Mrs. X., and she was continually removing the proper markings from them.

In our conversational meetings, my side of which was necessarily written, while her replies were for the most part spoken, there was no difficulty in the least about obtaining all necessary data.

The patient said she was the daughter of a well-to-do gentleman. She had been nicely raised in an environment not devoid of culture. She had been well educated, viewed in the light even of woman's learning in these times. She had been deaf for many years. Her disability had come upon her very gradually. She had worried about this considerably. At times she had consulted able physicians—specialists. None of them could promise her any cure for her trouble, deafness. She was well informed upon the subject of the anatomy of the ear, and also the physiology of it. She understood in a general way physics, electricity and mechanics.

Our conversation covered many subjects of little or no importance. Then I wrote:

"Suppose a private wire entered a New York telegraph office. Suppose that wire had been used always only for messages from San Francisco. Suppose someone in Chicago tapped the wire without the knowledge of the New York office and sent a message over the wire to New York. Where, do you think, the receiver of the message in New York would say, if he were asked, the message came from?"

"Why," she said, "from San Francisco."

Then I wrote the following:

"Suppose somewhere along the line of the afferent fibres of the auditory nerve there were produced stimuli: Mechanical, electrical or thermal or chemical, of such character, intensity and frequency as to produce vibrations which were recorded as sounds in the perception center of the brain, your brain, where is it most likely you would think those stimuli were produced or applied?"

She said, "If the sensation I experienced was one of hearing, I should think my ear-drum had reacted to some sound that was made by something or somebody within a normal range of hearing."

Again I took up the pencil and paper and wrote the following:

"That is the explanation of the sounds you interpret as words. You think you hear your husband speaking. You probably do hear some noises due to circulatory dis-

orders in the blood supply to the auditory mechanism. These are inside the tympanic membrane of drum, however, rather than outside. Imagination and sleeplessness or a state of mind bordering upon subconscientness then takes the place of sound sleep, or complete wakefulness, wherein the will and the intellect exercise a dominance over the sensibilities; and an idea engendered in subconscientness becomes an imperative or dominant idea in the conscient state, or in that state which appears to be the conscient state wherein we find many of the so-called insane as they seem to be moving about and regulating their actions towards their environment as they were dreams or phantoms moved about in them."

She said that was quite interesting, but she did not understand just how she was to be freed from the annoyance of her husband's calling her. I said: "One imperative idea must be driven out with another. You are now influenced by an imperative idea which is contrary to fact. On account of the dominance of this idea over your conduct, in the past, you have become ill mentally, and on account of your illness you have been brought to this hospital and you have been deprived of your liberty. Now, I purpose to have you accept another idea, founded upon reason, based upon fact as you accept it." She wished to be enlightened. Now," I said, "you admit you are deaf?"

"Yes," she answered, "I know it."

"You admit you cannot hear me speak, though near to you?"

She assented.

"You know you could not hear me speak if I were over there where you say you hear your husband, because I would be still further distant, You know that, do you not, from your knowledge of physics?"

Slowly—she seemed to comprehend my meaning. "Yes," she admitted.

"Well, upon this fact the new dominant idea which must correct your mental disorder has its foundation."

She consented to accept the new idea.

It had been already transmitted to paper, this new dominant idea. I handed the written directions to her. It was in the form of a prescription, wherein no drugs are needed.

"Repeat the following, as you might your prayers, until you have memorized it. Then repeat it to yourself continually, while you are at work—while you are at rest—while you are awake—for a week repeat it—and continue to do so—awake or half asleep—at all times repeat it."

And she read from the paper:

"I am deaf. I know it. I cannot hear anyone speak to me whom I can see speaking to me. Therefore, I do not hear anyone calling to me whom I cannot see. No one calls me. My husband is not calling me. I have no husband. I am not Mrs. X. I am Miss B."

I promised her if she followed the instructions she would recover. I promised her when she had recovered she should return to her people. That was where a grievous mistake was made by me. I promised more than was possible of performance. She did recover. At least, she consented to regard herself as Miss B. She freely admitted she had no husband. She said she was no longer bothered by his calling, though there were some noises in the ear which caused her annoyance¹. She asked if she might then go to her people.

That was the occasion of a lapse back to her former condition; for when her sister was asked to consider her leaving the institution, she promptly engaged passage for Europe for herself, and left the patient hopeless. Since that time the patient will have no further friendly conversation with me. She says I made her a promise and failed to keep it. Which only gives emphasis to the axiomatic rules of conduct of the old masters of the art of understanding and continuing in the good graces of the afflicted ones. They pointed out: One must not lie to the insane, not humor them, nor contradict them in their delusions.²

CHESTER H. KEOGH, B. A., M. D.,

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1. This admission by patient places her auditory defect in the class of illusions rather than hallucinations, properly speaking. As to all those instances in which there is disorder of sensation, or at least a diseased state of parts without the brain, affecting the organs of sense in such a way as to occasion, the mind itself being in an unsound state, erroneous impressions and false belief, Esquirol applies the term illusion, distinguishing it from hallucinations.

2. The hallucinations of the insane, according to the observations of Esquirol are intellectual phenomena, totally independent of the organs of sense, and may take place even though these organs may have been destroyed or so affected as to be no longer capable of function. Thus, there are deaf persons who fancy they hear words and speeches; and blind men who think they see a variety of objects. These phenomena depend on processes carried on entirely in the brain, without any participation on the part of the sensorial organs. "But," says his pupil, Prichard, "there are cases of a morbid state coming under the denomination of insanity, which form an exception to the preceding, for in them sensation itself appears to be disordered, or if not so, sensation modified by bodily disease becomes the occasional cause of mental aberration. In these instances there is some local disorder, which gives rise to painful or unusual feelings or preternatural sensations, and the mind mistakes the cause." In "Riel's case of a female insane patient who believed in midday, with her eyes open, she was pursued by specters, when her eyes were covered the illusion ceased."

KLEPTOMANIA AND PYROMANIA.*

BY JAS. G. KIERNAN, M. D.,

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Fellow Chicago Academy of Medicine, Foreign Associate Member French
Medico-Psychological Association; Honorary Member Chicago Neuro-
logic Society, Honorary President Section of Nervous and Mental
Diseases Pan-American Congress 1893, Chairman Section on
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ciation 1894; Professor Neurology Chicago Post-
Graduate School 1903; Professor of Nervous and
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ment Loyola University 1905;
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atry Kent-Chicago
College of Law.

THE erotic element in stealing merits a title which ignores the imperatively impulsive element implied by kleptomania. Following the course pursued by Schrenk-Noting¹ in regard to pain, sex excitation, this condition should be designated kleptolagnia.

The term includes both the conception of theft and the sexual excitement thereby, but excludes imperative impulse. Desire, according to Dupouy,² is an emotion whence it results that all causes increasing the emotivity will increase the appetitive power of the individual and quicken particular desire. Logically Dupouy cannot include all emotion but

* Continued from the *Alienist and Neurologist*, May, 1912.

only emotional exaltation since depression decreases physical and mental desire. In this causal category, remarks Dupouy, come repeated moral shocks, intense psychic traumata, profound chagrin and violent nervous agitation. The varied emotion which results from sexual irritation seems to be particularly active in the genesis of morbid emotion. "It would have been more logical to say that the normal emotivity of sex states takes on a morbid tinge under certain conditions of either temporary or permanent constitutional changes or states.

"The irritation augmenting the emotivity of the subject impels him to morbid desire and leads to obsessions."

Here is put very obscurely the law of the etiologic moment whereby, as pointed out twenty-six years ago,³ through the influence of an emotional state on a certain constitution abulia results and obsessions hitherto subconscious enter consciousness. For the reasons mentioned Dupouy claims "certain fetichists and collectors become" [he should say] 'kleptolagniacs'—'not kleptomaniacs.'

According to Dupouy these "kleptomaniacs" keep sharpening their desires regardless of what these desires stand for—artistic bibelotsy, postage stamps, women's apparel, (erotomaniac fetichists) they waste their entire sensibility in the contemplation and in the incessant physical or mental handling of their collections. The enjoyment they derive from it becomes more and more voluptuous and in turn fans the flame of the desire they have, to renew it. This is the vicious cycle in which these unfortunates turn, the desire to enjoy increasing their pleasure ten-fold, the latter causing the former to light up again. The impulsion, logical and fatal results of desire awakened in the presence of the subject wished for and not possessed, ends by becoming sufficiently powerful to triumph over the resistance put forward by the will, and the collector becomes a thief. Going a step farther, the emotion carried to its maximum becomes an agonizing, irresistible impulse; the desire has created an obsession, the collector is replaced by the 'kleptomaniac.'

This view is not justified by any psychologic analysis, desire cannot be considered an emotion, although it may result from emotion.

Although he does not put it clearly, Stekel seems to imply that 'kleptomania' is a sub-conscious symbolism of an ungratified suppressed desire. It would therefore differ, as Havelock Ellis points out, from the type described by W. L. Howard, where a girl stole men's garters to secure an orgasm. This type is outlined by Clerambault where the theft is the conscious symbol of gratified desire. Both these elements seem behind Stekel's cases, since the analysis is lacking as to the early phenomena. This assertion as to the presence of homosexuality in all 'kleptomania' is demonstrably untrue.

That an erotico-emotional factor may underlie stealing was shown by Lacassagne twenty years ago, as he points out that the chief object of certain women in stealing is to secure the voluptuous titillation that fright and worry over detection give them. In a case reported by Janet,⁴ the woman, although depressed later, stole to secure the voluptuous emotional exaltation she experienced. A girl⁵ (who stole a physician's buggy to enjoy the titillation of being a thief) found the chase "delicious, beautiful, wonderful. The blood tingled in the veins." She was "wild, intoxicated with pleasure." Stealing, as Griesinger, and others have pointed out, therefore, is not necessarily kleptomania, even when seemingly absurd motives alone exist. Stealing, however, is a product of many mental states which may be entirely unrelated to eroticism. The collector type, to which Dupouy calls attention, is found in both the sane and insane. Under the term collectionism, Maugazzini⁶ includes gathering of objects. He divides it into polycollectionism (gathering of many objects), monocollectionism (gathering one object) and mono and polykleptocollectionism; in both of which an element of theft occurs, while both are found in all psychoses.

Theft has not always the prognostic or diagnostic significance it has in dementing psychoses, where it omens the onset of dementia; in acute psychoses it may be an expression of psychomotor restlessness. Bodard ascribes poly-

collectionism in a katatoniac to stereotypy. Some of the articles "collected" suggested both polykleptocollectionism and fetichism. Toilet articles certainly suggest sexual symbolism. A female patient of mine, in whom the existence of delusions at one time was very apparent, became quiet and an assistant to the attendants. Owing to overcrowding a room by her alone, had to be used for two, whereupon a decidedly multifarious collection was found. There were 30 napkins, some stained with blood; 20 drawers; 30 chemises; 30 pocket handkerchiefs; 30 combs; 410 bangs wrapped separately, each package bearing cabalistic marks; 65 hair pins also wrapped separately; 10 pairs of shoes crumpled up and evidently used for masturbation. There was evident polykleptocollectionism and homosexual symbolism. The patient was originally heterosexual but seems to have become homosexual in the insane hospital. She was detected in cunnilinctus and tribadism. There were at the onset of the case systematized persecutory delusions which passed into megalomaniacal. Later, at the climacteric, these became dimmed and homosexual ideas appeared.

Any alienist who has kept track of the secondary confusional insane, the paretic, senile and terminal dementes, knows their tendency to collect rubbish. Often in the climacteric confusional insane, in the senile, paretic and terminal dementes there is a monocollectionism visible beyond the seeming polycollectionism; brightness is the quality sought. Here the patient is often really obsessed by a bright object while much more valuable things easier taken are ignored. In the monokleptocollectionism and polykleptocollectionism erotic elements often appear. In the first the stealing gives erotic satisfaction while in the second is material for future sexual symbolism which may form a connecting link with pygmalionism (a love of statues or paintings). Both types, however, may have merely the element of future gloating and not the erotic impulse finding complete satisfaction in the theft. Both types together with that of sexual satisfaction were behind the Guthrie thefts of art objects in Chicago.⁷

The issue of pyromania involves much the same elements. The pyrolagnia, allied with and often identical with the hysteric desire for a new sensation. The report of the Chicago fire attorney Sullivan asks:

"Do you dash bare-headed out of doors when you hear the shrill notes of the fire whistles? Or run down the street after the swaying fire engines in their mad dash through the streets? Do you feel a tingle in every fibre of your being, do you forget your meals, your work and your health when you witness the firemen in mist and smoke, directing powerful streams against a flaming structure, or the puffing engines throwing off trails of sparks and clouds of smoke? If these thrill you, you are an incipient pyromaniac."

Here are the same elements that differentiate kleptolagny from kleptomania. The irresistible impulse necessary to pyromania is, however, absent, hence the subject is capable of controlling himself. Sullivan claims that there are several stages of pyromania. "There are different stages of pyromania, but the difference is in the feeling that inspires them and the degree of satiation demanded. When a mind becomes affected pyromaniacally the troubles of this office begin. It is a weakness that can not be cured. We have eliminated many of the difficulties of the office by demanding that those found guilty of crimes resulting from pyromania be sent to an asylum, for the reason that the jail sentence is soon served and we encounter the same troubles over again.

"The great difficulty is to get sufficient evidence against suspects to impress the courts. The fires started by these persons usually are readily accessible, and therefore are soon discovered. That they are a great menace is readily appreciated when you realize how easily one of these unfortunates may cause a great loss of life."

"A record of the fires supposed to have been started by pyromaniacs, with evidence of their peculiarities, is kept on file in the fire attorney's office. There are three types of these persons—heroic, criminal and idiotic. All are possessed of a single idea—to start a fire for the excitement.

"Incendiary fires are all investigated carefully and seldom more than two or three fires are set by one 'bug' until we have noted the connection and apprehended those responsible," said Loftus.

"Probably the most notorious of the many cases that have passed through my hands was that of Andrew Hansen.

"Hansen is the type, according to alienists, that is possessed of a 'compulsive idea,' which is the basis of the symptom or disease known as pyromania. We have in our records thirty-four fires that he is suspected of having started.

"His particular 'bug' is to fire feed stores. He often turns in the alarm, warns the occupants of the building and insists upon assisting the fire department. He has been sent, at different times, to penitentiary at Joliet, the Elgin asylum, the Kankakee asylum and the penitentiary at Chester.

"Judge Tuthill took a personal interest in this man, and on two occasions paroled him. He has escaped several times and we are warned of his escape by his activities against feed stores. We have requested all authorities of institutions that have such fellows to notify this office when they are released.

"Charles Garry is another type. He has confessed to several fires. His object in every case was to cover up evidences of burglary. Just which crime he thought was the greatest is not known. He is now at the Joliet penitentiary.

"Le Rou Holzen, 16 years old, is now at the John Worthy school, where he was sent after confessing to having started eight fires. A member of a west-side fire company chased him from the station and he started out for revenge. He said to the fireman: "I will make you work." His fire setting activities were confined to barns and sheds. Twelve fires terrorized residents and business men of the northwest side last summer, three of them were started on the same night. The instigator of these fires never was arrested, although a weak-minded person who was at all the fires has been under the surveillance of this office since that time."

Broad and just as is the conception of pyromania shown by fire attorney Sullivan, still he is unacquainted with all the facts in the case of Hansen. This man whom I examined at the instance of Judge Tuthill I found to be an epileptic in whom sunstroke, while in the army, in the Philippines had produced a fit-replacing mental state. The aura consisted in insomnia and errabund tendencies, restlessness, followed by the fire raising tendency of which at the most, if at all, he was only conscious. There seems to have been an olfactory hallucination precedent the few instances of arson remembered. As a rule he remembered nothing. After vain attempt to treat him he was sent to Elgin despite his eloquent plea that he was sane and was under the influence of liquor, when a certain arson couldn't be denied. According to the testimony of the then Fire Attorney Hogan and some policemen he was in a dazed state which they had noticed in connection with the arson periods. He remained for a year in the state hospital when, at the request of a Judge and some friends who assumed responsibility, he was released, whereupon the fire raisings were resumed. This case peculiarly justifies the positive position taken by Griesinger, that the underlying factors of all cases of alleged "manias" should be carefully determined.

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1. Suggestive Therapeutics in Sexual Perversion.
 2. Jour. Aborne Psych., 1909.
 3. Delusions and Imperative Conception, Alienist and Neurologist, 1890.
 4. Jour. de Med. de Paris, 1896.
 5. Alienist and Neurologist, 1905.
 6. Rev. Sper de Freu., 1895.
 7. Urologic and Cutaneous Review, 1914.
 8. Mental Pathology and Therapeutics.
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HEAVENLY BRIDEGROOMS*

BY THEODORE SCHROEDER

AND IDA C.

"The Sons of God saw the daughters of men that they were fair; and they took them wives of all that they chose."

Genesis 6:2.

IN one of the oldest of the Vedas—those books which contain the legends of the Aryans before they split up into fragmentary races—we find a similar story about Urvasi and Pururavas.

These two stories are usually explained as myths which show how the dawn vanishes as soon as it looks upon the sun. In solar myths, the dawn is often typified as a maiden, the sun-god being her lover who pursues her vanishing form through the heavens—an idea picturesquely brought out in the myth of Cinderella. If these two stories really are a bit of sun and dawn folklore then, Urvasi and Psyche must each be the dawn-maiden, and Pururavas and Cupid must be the sun-god on whose glorious form, unveiled by any clouds, the dawn-maiden dare not look, for, as she looks, the two lovers become separated—*i. e.*, the dawn vanishes before the rising sun. But it is a little curious that in one story, the maiden disappears, while in the other it is the lover himself who flees. Obviously there is some other myth than a purely solar one involved in these two stories,—stories so strikingly similar and yet so strikingly at variance in the one feature in which they should agree, if true sun and dawn myths.

*Continued from May, 1916.

May not their likeness be due to their being memorials of the belief in Borderland marriages and in the self-control which is obligatory upon the earthly partner in such marriages? May not their unlikeness as to the sex of the partner who disappears when that self-control is violated, be due to there being heavenly brides, as well as heavenly bridegrooms?

To these same myths, I take it, belong all those fairy stories of which Beauty and the Beast is the type. Here, a maiden noted as a rule, for her amiability and gentleness, is served each day by invisible hands, and at night receives her lover, in the form of a handsome prince. By the ordinary light of day, he is a monster, appalling to behold, or, in some of the stories, he is invisible; but night and the marriage couch cause him to materialize in his true shape. Finally, her family and friends—themselves quite outsiders as to these experiences—work upon her feelings and make her believe that this union is evil (in occult parlance, it would be termed diabolical) and she breaks off her connection with him. In the end, true love triumphs, and the lovers are reunited—under happier auspices, that is, in the fairy story; in actual life, it too often happens that Beauty and the Beast are permanently separated by meddling outsiders who ignorantly assume that everything which they cannot understand comes from the Devil. The poor earthly psychic has so constantly dinned into her ears the fact that her mediumship has revealed glimpses of monstrosities and deceptions, that she comes at last to fear lest her invisible visitor be in truth the evil demon which at times, by the sober light of day, he seems to be. All unaware of the law by which her own failures and peccadilloes bring about subjective hallucinations which mislead, she ascribes to her angelic briedgroom a tendency to evil which he does not possess, and finally comes to shrink from him as demoniacal. And the laws of Borderland forbid his undeceiving her so long as she hold fast to her prejudice as if it were gospel truth. Thus Beauty too often turns away from her princely lover forever, so far as this earth-life is concerned, as Beauty

in the fairy story did from the husband whom ignorant outsiders had led her to look upon as Beast.

Pyramus and Thisbe, the lovers who, separated by a huge wall, were fain to satisfy themselves with kisses exchanged through a hole therein, are a euphemistic expression for those marital unions one of the parties to which is invisible and his earthly love impalpable to the physical senses. In this story a bloodthirsty lion puts an end to the lovemaking. This is probably the solar lion, the meaning being that the ancient faith is superseded by the later and (in some respects) purer Sun Worship which seems to have been a reform movement of the science and materialism of the time against the Borderland sensuality which obtained in the declining age of Sex Worship.

Isis and Osiris are also types of the husband and wife who unite upon the Borderland. Egyptian sacred traditions were wont to relate that Osiris was killed by the Typhon, who then cut up his victim's body into fourteen pieces, enclosed it in an ark, and set adrift upon the River Nile. Isis, the Virgin-Mother, sought far and wide for these remnants of her husband's body. One legend states that she found all, except the phallus; another, that she found nothing except the phallus, and from that solitary fragment, she reconstructed her husband, entire. Here we evidently have two sides of the same esoteric idea—that the loss of sex power constitutes the true death of the soul (not, of course, the spirit) and that in the finding of one's marital partner on the Borderland the ghost may be gradually materialized into substantiality by beginning at the same starting-point as did Isis.

Heavenly *bridegrooms* it will be noticed, predominate over heavenly *brides* in Borderland traditions. The reason, I take it, is that women, because of their social environment, usually lead a more self-controlled and temperate life than men do, and thus are in most (though not all) respects more worthy of marital union with an angel. Custom allows men more freedom—a privilege which the masculine sex is not slow to avail itself of, especially in the direction of wine, women and tobacco. These three dissipations not only

exhaust the nerve force of men, but blunt both their physical and their moral sensibilities; so that the man for whom, in all possibility, his angel mate may be waiting upon the Borderland, may find himself handicapped at the outset, should he ever essay an adventure into Borderland romance while still on the earth. In this connection, we may remark that in India, where the attempt to obtain a spirit wife is said to be of common occurrence (and it would appear often rewarded with success) we find a nation singularly gentle and peaceable in disposition, unaccustomed to drunkenness until taught it by outside peoples (there is a proverbial saying among the Hindus "as drunk as a Christian") and endowed by nature with a tendency to aspire to union with God. Last, but not least, it is a nation whose religions, for the most part, recognize the truth that sex is holy; and in this it is in strong contrast with our Western "civilization" where the most sacred function of humanity is looked upon as vile. We occidentals have a whole life's teaching to unlearn, before we can approach the subject of marital relations on the Borderland from a natural and pure-minded standpoint.

The chief tradition regarding spirit brides relates to Lilith or Lilis or Lilot and is mostly Rabbinical. As in the case of the angelic bridegrooms, she is supposed to be demoniacal. Lilith is said to have been Adam's first wife, one tradition says that and by her he begat only demons, another says that she rebelled when Adam assumed authority over her and fled from him to the evil angel Samall; to whom she bore a demon progeny. Another legend has it that being jealous of Eve she slipped back into Eden behind the *particeps criminis* in the temptation.

Another says that Adam kept himself apart from Eve for a hundred years in order not to fill hell with their offspring; but that in a weak moment a female devil, called Lilith, seduced him and became his wife, and from their union arose devils, ghosts and evil night dreams; and Eve in like manner became the wife of a demon. [The Serpent in Paradise. London.] Of a similar tenor is the tradition about the Zoroastrian Ycina, who fell from a

state of innocence by means of a great serpent, the Azis-Dahaka.

"For a long period Yiena and his subjects were in the power of this evil serpent, Azis—Dahaka, the demons * * * Yiena himself in order to oblige his masters, had to abandon his own wife, who was also his sister, and to take a female devil for his wife, and to consent to the union of his former wife with a demon. From these unions were produced apes, bears, and black men. During this evil period women much preferred young devils to young men for husbands, and men married young seductive "Paris," or "female devils."

[The Serpent in Paradise: The Serpent in Mythology.]

The psychic who can sustain marital relation on the Borderland must above all be sensitive at the extremities of the nerves of touch. Neither blind people nor deaf people are hindered by their respective infirmities from marrying in this earth-life and on the Borderland a psychic may be clairvoyant and clairaudient to only a limited extent, and yet be a partaker in connubial joys. For the Borderland husband must materialize more or less fully to enable her to understand the relation clearly upon the physical side: Whereas for most men this is unnecessary, and the spirit bride may remain in all *save a few essentials*, invisible, inaudible, intangible—a veritable "woman of air." Hence her ghostliness and her philological connection with the idea of pale blue or pale purple—the color of air and the mist.

Lilith is said to come to young men's bedsides at night to seduce them, under the aspect of a beautiful and finely dressed woman with golden hair. And, afterwards she strangled them, and they are known to be Lilith's victims because one of her golden hairs is found tightly wound around the victim's heart. In the Zoroastrian legends, she is much connected with night and night-dreams; and men are cautioned not to sleep alone for fear of the evils of Lilith. She also lies in wait for children to kill them if they are not protected by "Amulets."

"Herodotus says that the Arabians called the moon 'Alilat the Assyrian word for night is Lilat,' and Talbot

supposes that the Arabians really called the moon 'Sarrat ha Lilat,' the queen of night. * * * * *

"Mr. Talbot also says 'Alilat' may also mean the star Venus.

"The Greeks considered Lilith evidently to be the moon, as with them she is Ilithyia, the sister of Apollo, one of the birth goddesses. Night in Helrewis *layelah*.

"That the moon should be selected to represent the feminine principle is readily accounted for by her waxing and waning propensities, to say nothing of her controlling or coinciding with the feminine periods."

[The Serpent in Paradise, etc.]

Summing up these varying traditions we find the following incidents prominent:

1. A woman who is not of the earth but evidently from an unknown world enters upon relations with Adam or with the men of later generations.

2. The relation is in most cases that of husband and wife and not a mere liaison.

3. [In those cases where the relation is illicit, the earthly partner comes to an unfortunate end.]

4. This woman from the unseen world is credited with being a seducer and a devil.

5. She bears no children save demons and is reputed to destroy children.

6. She causes men to dream evil dreams at night.

Lilith is evidently the complement of the tradition about angelic bridegrooms. That the typical spirit bride should have so much more unsavory a reputation than has the typical spirit bridegroom of nowadays. The masculine nature is proverbial for its lack of self-control where women are concerned: and in this it has usually contrasted unfavorably with the self-control of women in similar cases. On the other hand, the men of our Western civilization are mostly superior to our women (of the virtuous classes) in the ardent, dramatic and artistic expression of love for the opposite sex—a desirable qualification in the romance and uncertainties and trying ordeals of Borderland wedlock.

If, therefore, the propositions which I have laid down as to the necessity for self-control in occult investigations be correct we need not be surprised that the spirit bride is ere long denounced as demoniacal and seducing. But it is to the ignorance or the wilful wrong-doing of her earthly lover that is to blame, and not the spirit-bride—unless in some rare instance, where the celestial visitor is exceptionally careless. In that case, her superiors in the invisible world interfere and remove her. The connection with her earthly partner is snapped never to be resumed until he passes over to her world at death. But such failures on the part of the heavenly visitor are rare; and if the resulting phenomena are diabolical, it is the earthly medium's own fault.

That she should bear no children except demons points to the proposition which I have already advanced that children cannot be begotten from Borderland marriage unions. If the earthly husband still insists on doing all he can to beget such children he breaks the law of Borderland, and will be led deeper and deeper into the mire of sensuality, and at last, perhaps be deceived by a subjective hallucination of devils whom he will be told are his children. If he presses for information, he will probably receive a more explicit truthful statement; *i. e.*, that his spirit bride is unable to bear children on the Borderland of two worlds. But should he fail about this time in some detail of moral duty, or clear-headedness, and especially should he insist in sowing seed where no harvest can be reaped, he will most certainly be misled by all sorts of fantastic excuses. For such is the occult law. The psychic who, whether ignorantly or wilfully, is unworthy, loses his grip on the lines of communication, and his own ill-regulated sub-liminal consciousness then steps in with its ingenious excuses—such as, perhaps, that his celestial partner is abnormally constituted as a woman, or that she kills their children as fast as they are begotten, etc, etc. And thus, through the failure of the earthly husband to observe the laws of marital self-control on the Borderland, one more tradition is launched upon the world about the devil-bride who seduces men and begets demons and kills children.

That she should be credited with being the author of "Evil night-dreams" shows how prone the partners of spirit brides have been to subjective hallucinations. We do not find any such wholesale charge brought against spirit *husbands* of portraying evil dreams as is brought against Lilith. The imaginations of men's hearts must indeed have been evil in those days and their brains beclouded or the difference between a materialized spirit bride and the subjective phantasm of an amorous dream would have been more sharply defined. The psychic who conforms two separate planes of existence has forsaken the path of self-control and clear-headedness, and has entered upon the path whose end is insane delusion.

In the supplement of Littre's Dictionary, (French), 1877, occurs a suggestive etymology of the word *lilac* (or as it is in French, *lilas*.) The writer connects the root of this word with the Persian *nil*, indigo, and calls attention to the various Persian words, *nilah*, *niladj*, *liladj*, *lilandj*, *lilang*, all relating to indigo. He connects the word *lilas* (French for *lilac*) with these words and also with the diminutive *lilak* (bluish, as fingers blued by the cold)—a tint which perfectly characterizes the flowers of the lilac of Persia which are of a pale purple. May there be some philosophical connection between this palely purple flower "*lilas*" and the ghostly "*Lilis*" or "*Lilat*" or "*Lilith*?"

Lilith figures in a text of Isaiah: but we have to go both to Mohammedan and to Ancient Greek folklore to find the connecting link between this text and the Lilith of Rabbinical traditions. The text refers to the destruction which the Lord threatens will befall Eden, and reads:

"And thorns shall come up in her palaces, nettles and thistles in the fortresses thereof; and it shall be an habitation of jackals, a court for ostriches and the wild beasts of the desert shall meet with the wolves [or howling creatures]: and the saytr [or he-goat] shall cry to his fellow: yea, *the night-monster* shall settle there, and shall find her a place of rest." Isaiah XXXIV. 13, 14, Revised Version.

The word "night-monster" is in Hebrew, "*Lilith*," The King James version translates this word "screech-owl;"

the Vulgate, "Lamia;" in Luther's Bible, "Kobold." *Lamia* or *Lamya* is found in the Great Bible, and in Coverdale's, Matthew's, Beck's and the Bishop's Bible.

Now a lamia is a mythical serpent-woman of a demoniacal character. Philostratus, in his *Life of Apollonius of Tyana*, gives a memorable instance. A young man on the road near Corinth met a charming woman who invited him to her house in the suburbs of the city, and said that if he would remain with her, "he should hear her sing and play, and drink such wine as never any drank, and no man should molest him; and she being fair and lovely would live and die with him." The young man was, as Burton in his *Anatomy of Melancholy*, puts it in giving the account, "a philosopher, otherwise staid and discreet, able to moderate his passions, though not this of love," and he "tarried with her awhile to his great content." At last he married her. To the wedding came Apollonius, and he at once recognized her as a lamia, and declared that all her furniture was but illusion. She wept and begged Apollonius to be silent, but he persisted in exposing her, whereupon she, her house and its content vanished.

This is probably a Beauty and the Beast myth on the masculine side, Apollonius playing the part of the outsider who separates the lovers by harping on the things which are illusory and monstrous in the young man's psychic manifestations. It is worth noticing in this connection, that the young man had been living a temperate and self-controlled life when he was first approached by this Lamia or Lilith, so that he was evidently found worthy to taste the joys of affectionate connubial intercourse with his mysterious bride. Here evidently, the young man is not strong enough to endure the training required to consummate Borderland wedlock. He also, evidently, does not have his sub-consciousness well under control, but allows it to run away with him. Mastery of self in every possible aspect, physically, intellectually, morally, affectionally is one of two requisites for sustained marital relations on the Borderland; the other requisite being steadfast aspiration to personal communion with the Divine.

TO BE CONTINUED.

HERMAPHRODITISM IN THE HUMAN SPECIES.

By R. W. SHUFELDT,

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ONE of the most important and interesting articles on hermaphroditic conditions in man which has been contributed to the literature on that subject has recently appeared in the *Journal*, the case having been described by Dr. Howard, who had it in his practice.¹ So full and complete is the description there given that to further discuss the case here would be quite superfluous.

It has not been my fortune to have had an example of complete human hermaphroditism in my own practice at any time; but this is not to be wondered at, as the occurrence of such a condition is by no means a common one. As a matter of fact, I recall but two instances that I have personally examined, but the particulars with respect to them are now somewhat dim in my memory, as they were seen so long ago. One of these cases was in the practice of the late Dr. A. F. A. King, of Washington, D. C., and the subject was quite as interesting as Doctor Howard's case, the difference being that the person had about as many superficial male characters as his had female. Indeed, while the essential sexual organs were distinctly twined in one, the individual had a strong and luxuriant beard and moustache, and decidedly leaned to the masculine in corporeal contour, while there was a total absence of any evidence of gynecomasty.

Several years ago, Dr. Ch. Debierre, Professor of Anatomy in the Medical Faculty at Lille, described, in great detail, a number of these cases in his excellent work, *l'Hermaphrodisme* (J. B. Bailliere, Paris, 1891.) Other highly instructive cases may be found in his work "*Malformations of the Genital Organs of Women*," translated by J. Henry C. Sims, M. D.



FIG. 1—ANTERIOR VIEW OF DOCTOR DE FOREST'S CASE.



FIG. 2.—DR. DE FOREST'S CASE IN A SEMI-RECLINING POSITION, DISPLAYING THE PRESENCE OF A VAGINA.



Hermaphroditism has been personally observed by me in a few cases among the vertebrata below man, and I have published at least one instance of the sort.²

About ten years ago, Dr. Henry P. de Forest, of New York City, invited my attention to one of the most interesting cases of the kind on record. This individual I never saw personally, and the several attempts I made to do so failed, although at one time it very much appeared that my efforts were about to be successful. Doctor de Forest has published a brief account of the person in question, presenting me with three photographs illustrating it, with his kind permission to publish them.³ As cuts, two of these photographs illustrate the present article, and it will be at once apparent that the case is even more strongly pronounced than the one described by Doctor Howard. According to Doctor de Forest who kindly gave me this person's biography—whom, he said, was at the time 24 years of age and declined to give "her" family history—it appears that the individual in question "had been reared as a woman; had menstruated regularly, and both in appearance and manner of life was regarded as a young woman of rather prepossessing appearance. She had no growth of hair upon the face or elsewhere, except on the pubic and axillary region. She lived in a boarding house, where was also a man of fifty and his daughter of eighteen. She lived with this man as his wife in a surreptitious manner, became pregnant, and was delivered of a child. In the mean time the daughter of the man became very friendly with her, and the masculine side of her nature asserted itself, and, overcoming the scruples of the girl, they lived together as man and wife. The daughter became pregnant and in turn was delivered of a child."

If one will study the two cuts here reproduced, it will be seen that this person possesses rather a comely face and a fine head of black or dark-brown hair. She wears ear-rings. The breasts are very fully developed; they are rather far separated, and the nipples are small. Indeed, the head and torso of this person appear to be

at least ninety per cent female, while there are those who claim to see a certain amount or trace of masculinity in the features.

From the hips down to include the pelvic extremities, the limbs may be said to be largely masculine in their morphology, the characters becoming more evidently so as we approach and include the feet. This of course does not take into consideration the genitalia.

Both testicles and penis in this case are developed, and are of large size.

Although I have never personally examined this case, I am of the opinion, judging from what I know of its history, that all the internal generative organs of the female are present and functional.

It is interesting to note that the hair upon the pubis has the arrangement as we find it in the average male, the growth not being extended down bilaterally on the sides of the genital fissure or vaginal aperture. Whether a mons veneris is developed in this case I can not say, and Doctor de Forest evidently made no examination in order to disprove or establish that point.

1. Howard, William Lee. "Opposite Sex Twins in One Body?" *New York Medical Journal*. Oct. 23, 1915, pp. 843-845, Figs. 1-3. In this connection it affords me pleasure to thank Doctor Howard for the fine series of photographs he has presented me with, fully illustrating this remarkable case.

2. Shufeldt, R. W. "Case of Canine Hermaphroditism," *The Alienist and Neurologist*, Vol. XXVIII, No. 2, St. Louis, Mo., May, 1907, pp. 189-192; 2 cuts in text. This was a case in a Boston terrier, which by invitation, I examined in the wards of the New York Veterinary Hospital in September, 1906. A full account of it is given in this article.

3. De Forest, Henry Pelouse. "Hermaphroditism, with a Remarkable Case," *The Medical Council*, March, 1909, pp. 105, 106.

HEINE-MEDIN'S DISEASE—WITH MEDIN'S ORIGINAL DESCRIPTIONS.*

BY SMITH ELY JELLIFFE, M. D. AND E. A. DEDERER, M. D.

September 27. Stuporous. The stools shiny, and of foul odor.

September 28. In the morning dyspnoea, and a few hours later tracheal rales. In the afternoon became suddenly cyanotic, there were long intervals between the inspirations. Died in the afternoon, on the fifth day after the onset.

DIAGNOSIS: General infantile paralysis, involving all spinal nerves, oculomotor, abducens, trigeminus, vagus [?], and the hypoglossal nerves.

Post mortem changes. [Hofsten.]

Several subcutaneous extravasations of blood.

THE BRAIN: Dura mater slightly congested. The pia mater moderately congested in the occipital portion, and over the vertex. No increase in the subarachnoidal fluid. The parenchyma, especially the central convolutions, the central ganglia and crus cerebri normal; the lateral ventricles, cerebellum and pons present a normal appearance, but the grey matter of the medulla oblongata is markedly hyperaemic.

SPINAL CORD: Cross sections immediately below the medulla oblongata show hyperaemia of the grey matter in the posterior and anterior horns, and in the anterior left nerve roots. The white matter is oedematous. The upper portion of the cervical region shows hyperaemia of the anterior horns, and punctate hemorrhages in the left horns. The same appearance of the lower portion, and in addition the left posterior horn, is enlarged. The dorsal region is less hyperaemic, but two successive sections show punctate hemorrhages between the anterior horns, close to the central canal.

*Continued from February, 1916.

The lumbar region is less hyperaemic in the upper portion, but most marked in the middle, and more marked in the anterior horns. The left horns are larger than the right and of reddish, greyish color, and gelatinous appearance. In the lower portion of the lumbar region, the grey matter is more oedematous, and is less distinctly outlined against the grey.

Lungs normal.

HEART: Flabby; myocardium greyish. Several bead-like excrescences on the mitral valves—*Noduli albini*. Otherwise normal.

SPLEEN: Enlarged, soft, friable.

LIVER: Not enlarged but flabby. Cut sections, brownish red surface, with gray lines. Oedematous, but outlines distinct.

KIDNEYS: Soft and friable; congested.

INTESTINES: Contents not fluid or mucous. The mucous membrane in its entire length oedematous, especially in the ilium. The solitary follicles enlarged, infiltrated. Peyer's patches infiltrated, here and there hyperaemic. The mesenteric glands, enlarged hard, greyish red on section.

The microscopic examination is detailed under the chapter Pathologic Anatomy.

The following case is of interest, as it presents paralysis of the abducens.

XXXV. Male, aged 1 year. Onset September, 1887. After a febrile stage, lasting a few days, paralysis in the legs and arms. Motion returned in the arms later.

When seen in June the following year, infantile paraplegia with paresis of abdominal muscles, convergent strabismus of left eye. Child otherwise healthy.

XXXVI. Female, aged 4 years. Onset September, 1887. Observed June, 1888. Typical acute anterior poliomyelitis.

XXXVII. Similar case. Onset October. Febrile stage, 2 days.

XXXVIII, XXXIX. Onset October, febrile stage lasting a few days. One lower extremity paralyzed.

XL. Male, aged 2 years. Onset October 31. Fever lasting 8 days. Had fallen off the table the day before the onset, but did not seem to have been injured. Inferior paraplegia, permanent in the left leg.

November 23. Right pupil larger than the left; both react normally to light and accommodation. Diminished reflexes and degeneration reaction in right leg, though motion has returned.

The following case, I regard as one of infantile paralysis:

XLI. Male, $2\frac{1}{2}$ years. Onset October. Had measles in beginning of October, recovery complete and uneventful. The mother suddenly noted one morning that he could not close the right eye, and that the mouth was drawn to the left side. Degeneration reaction. Right ear normal.

XLII. Female, aged 7 months. Onset November 20. Fever lasting two days, then sudden and complete paralysis so the child could not turn in bed, or lift up the head. The muscles of the neck and arms soon regained motion.

December 3. Head and arms possessed normal motion, but the child cannot sit up, or turn in bed. Right leg flaccid, tender on palpation. No apparent atrophy. Absence of cutaneous and tendon reflexes in right leg; present but diminished in left leg. Abdominal reflex weaker on the right side. Degeneration reaction in right leg; partial degeneration in left.

December 6. Pneumonia.

June 26, 1888. Right leg paralyzed; child otherwise healthy.

XLIII. After three days of fever paralysis set in in right leg. This persisted until seen five weeks later. Complete degeneration reaction in the paralyzed limb, and partial reaction in the healthy leg.

Towards the end of the epidemic of 1887, occurred a case which in my opinion indicates that acute spinal paralysis in adults is identical with infantile paralysis.

Female, aged 21 years. Onset October 1, of acute paralysis. Death on the 8th day. The clinical picture was that of ascending paralysis with fever. Death was due to paralysis of the muscles of respiration. There were no

meningeal symptoms, stupor or convulsions, so often observed in children. There were no microscopic changes in the brain, meninges or spinal cord, except hyperaemia in the latter. The spleen was soft and friable.

The microscopic examination revealed acute anterior poliomyelitis with degeneration in the ganglion cells of the horns, but not with the intense inflammation noted in children.

ACUTE SPORADIC CASES, 1888-1894

In the following list the cases are reported chronologically.

1888. February, polioencephalitis 1. April, paralysis of facial and abducens 1. May, spinal and facial paralysis 1. September, spinal paralysis 2, polioencephalitis 1.

1889. January, spinal paralysis 1, polioencephalitis 2. April, spinal paralysis 1, polioencephalitis 1. June, spinal paralysis 1. August, spinal paralysis 1, facial [bilateral] 1. September, spinal paralysis 1, polioencephalitis 1.

1890. April, spinal paralysis 1. July, spinal paralysis 3. November, spinal paralysis 1.

1891. January, polyneuritis 1, spinal paralysis 1, [fatal]. July, spinal paralysis 1. August, polioencephalitis 1, spinal paralysis 1. September, spinal paralysis 1.

1892. March, polioencephalitis 1. July, spinal paralysis 1. November, spinal paralysis 1. December, polioencephalitis 1, spinal paralysis 1.

1893. April, spinal paralysis 1. July, polioencephalitis 1. August, spinal paralysis 1, polyneuritis 1. September, facial and abducens paralysis 1. November, acute ataxia 1. December, spinal paralysis 1.

1894. May, spinal paralysis 1, polioencephalitis 1. June, spinal paralysis 1.

Arranged according to the topography of the lesions of the nervous system, the 49 cases appear in the following table:

Spinal paralysis.....	30
Spinal and facial paralysis.....	1
Facial monoplegia.....	1

Facial diplegia.....	1
Facial and abducens paralysis.....	2
Acute polyneuritis.....	1
Acute ataxia.....	1
Acute polioencephalitis.....	11

Only half the number of cases have been observed by myself, and I have further refrained from giving a detailed description of these cases, as the identity between the typical epidemic and the atypical cases is harder to establish when the latter appears sporadically.

THE EPIDEMIC DURING 1895

XLIV. Male, aged 13 months. Onset March 18. Fever, vomiting, convulsions, somnolence, strabismus, stertorous breathing with left hemiplegia. Acute stage, lasting 3 days.

April 17. Only slightly diminished motion in the affected limbs, and left side of face. Partial paralysis of left external rectus muscle. Increased tendon reflexes.

August 23. Spastic condition of left limbs.

DIAGNOSIS. Acute polioencephalitis, with paralysis of the left abducens.

XLV. Male, aged 2 years and 3 months. Onset April 23. Fever, vomiting and headache lasting one day; following day apparently well, though he dragged left leg in walking. In the evening again fever and vomiting. Complete paralysis of the left leg. Rigidity of the neck.

March 25. Right leg paralyzed.

XLVI. Male, aged 1 year 11 months. Onset June 24. Febrile stage lasted 4 days. Paralysis and atrophy of right leg.

XLVII. Female, aged 4 years. Onset July 12. Was seized suddenly at noon with headache, pains in the limbs and vomiting. In the afternoon legs became paralyzed.

July 15. Unable to move in bed, complete paralysis. Pain and tenderness to touch, somnolence, retention of urine, temperature 38.2°.

July 16, Dyspnoea, coarse rales, noisy respiration. Temperature 37.5° to 38.1°.

July 17. Dyspnoea; respiration rapid and noisy, pulmonary oedema; cardiac sounds inaudible on account of rales. Pulse 123; temperature 37.3°, 38.1°, 37.7°.

Violent pain when touched. Cannot lie long in one position but unable to change it herself. Pain in frontal and occipital regions. Can now rotate the head and move left arm.

July 19. Urination normal. Motion restored in left arm. Temperature 36.9° to 37.5°. First natural bowel movement.

July 23. Takes an interest in the surroundings. Dyspnoea continues, but less marked. Cardiac sounds normal. Pulse 125. In the evening restless. Transitory attack of suffocation.

July 25. Fascies: anxious, suffering. Skin cold, moist. Constant headache. Pain and itching in the legs and left arm. Tenderness has disappeared. Touch sense diminished or absent in the lower extremities. Passive movements of legs cause pain. Active movements absent in the legs. Reflexes absent. Paralysis of the right abdominal and thoracic walls. In the dorsal decubitus the body is flexed to the left. Irritable, sleeps poorly; urination normal; respiration 40.

July 31. Pulse 100, irregular in force and rhythm. Can hold the head erect when in the sitting posture. Respiration nearly normal.

August 10. Sensibility to touch returning. Can now move the toes of the right foot. Pulse normal.

October 15. Can now turn over in bed.

DIAGNOSIS: Flaccid paralysis of lower extremities, and of right shoulder and arm with atrophy. The recurrent attacks of dyspnoea and pulmonary oedema were probably due to paralysis of the respiratory center. The itching of which the child complained was due to paraesthesia.

The marked sensory disturbances indicate involvement of the peripheral nerves. Hence the case is one of acute polyneuritis, with acute anterior poliomyelitis.

XLVIII, XLIX, L. Male. Onset July 15, 17, 27.

Febrile stage lasting a few days. Inferior paraplegia.

LI. Female, aged 3 years 7 months. Onset August 1. The first symptom was rigidity of the neck. Three days later, in the night, fever, pain and tenderness in the legs. Could not stand or sit up. This stage lasted one week. For several weeks she could only creep around. Could walk towards the end of September.

LII. Male, 5 months. Onset August 17. Typical infantile paralysis.

LIIL. Female, 1 year and 10 months. Onset August 20. Fever, twitching in left arm only, later also in left leg. Paralysis of left leg the following day.

September 7. Paralysis [flaccid] with atrophy and cyanosis of left leg. Left patellar reflexes increased.

The increased reflex in the pressure of flaccid paralysis, together with the localized convulsions indicate the possible co-existence of a slight and transitory polioencephalitis.

LIV. Male, aged 3 years, 1 month. Onset August 25. Hyperpyrexia, restlessness, shuddery speech; no twitchings in the extremities, but marked tremors when he attempted to stand or walk. After a few days he became somnolent, complained of pains in the legs. No bowel movements in three days.

September 2. Somnolent. Slight motion in extremities. Child does not want to lie on his right side. Lower extremities cold and tender to touch, but tenderness is not especially marked over the nerve trunks. The patellar tendon reflexes are absent. The muscles do not react to the faradic current.

September 7. Brighter, tendon reflexes normal.

September 7. Ataxic gait. Patellar reflexes again absent.

September 16. Patellar reflexes absent on the left side, present on the right.

September 23. Improvement in the gait. Right leg somewhat weaker than the left.

October 16. Gait normal.

DIAGNOSIS: Acute polyneuritis. The diagnosis is based on the tremors, pain, paresis, chiefly ataxic and absence of reflexes and response to faradism in addition to the short duration of the attack. Polyneuritis could however not have

been diagnosed if the child had not been under observation from the time of the earliest symptoms.

LV. Male, aged 3 years. Onset September 4. When 1 year old had pneumonia and peritonitis. Onset with headache and sore throat. The next few days the child was stuporous.

September 8. Cries out suddenly, as though in pain. No convulsions or vomiting.

September 9. Cries when touched. Lies on the back with the legs drawn up. Retraction of the neck. Does not answer when spoken to. Does not seem to recognize the surroundings. The pupils are of equal size. Strabismus not observed.

September 10. Tremors of tongue and choreic movements of right arm.

September 11. Convulsions during the night. Left corner of the mouth twitches. The head is drawn backwards. Cramp in the extremities, which are held in full extension. Stuporous cry. Pulse is regular. No defecation.

September 12. Less stuporous; temperature normal; answers "yes" and "no," though indistinctly. The nystagmus has disappeared. Tremors of face and tongue less marked.

September 18. Speech more distinct; can only stand or walk when supported. Patellar reflexes increased. Ankle clonus.

September 20. There is no atrophy or coldness of the extremities. Normal motion in the upper extremities. Legs still weak.

October 20. Gait normal.

DIAGNOSIS: Polioencephalitis. The diagnosis was only established on the fifth day. Up till that day the disease resembled meningitis in a marked degree. The chief symptoms pointing towards polioencephalitis are: the short febrile stage [8 days], somnolence, restlessness, delirium, disturbances of motility appearing at the end of the febrile stage, the tremors, incoordination, the sudden improvement after the fever ceased and the persistence of cerebral paralysis of the lower extremities after the other signs cleared up.

This case emphasizes the fact that polioencephalitis does not invariably cause hemiplegia, but that the cortical motor centers may be equally affected in the two hemispheres, parallel to the bilateral affection of the spinal motor centers.

LVI. Female, aged six years. Onset September 6. Past history: Pertussis and measles one year ago. The past few months dyspepsia and anaemia.

Present illness: Was suddenly seized with general malaise and vomiting. Anorexia. No movement of the bowels. Micturition normal.

The following day, complained of pain in back and sides. Headache. No more vomiting. September 8, fever, anorexia, constipation. Motion not interfered with. September 9, fever and delirium. Frequent desire to micturate. Screamed when touched. General and local convulsions. Stupor. September 10, the mouth drawn to the right side. Still no movement of the bowels. During the night improved suddenly, the convulsions and delirium ceased, and she could stand on her legs without being supported. Patellar reflexes absent. September 11, temperature normal. Gait normal. Slight twitching around the mouth. Left arm somewhat flaccid. Left pupil larger than the right. The tongue deviates to the left. Left facial paralysis. Spontaneous defecation. September 15, inequality of pupils persists. Reaction to light and accommodation normal. Left palpebral fissure larger than the right. The mouth drawn to the right, the tongue deviates to the left. No sensory disturbance. The left sterno-cleido-mastoid weaker than the right. Patellar reflex diminished on the right side, abolished on the left. No vasomotor disturbances or atrophy. September 21, patellar reflexes normal. Upper branch of the facial still paralyzed. Otherwise cured.

DIAGNOSIS: Infantile paralysis. Acute polioencephalitis paralysis of oculo-motor, left facial, left hypoglossal and accessory nerves.

The only signs of poliomyelitis in this case was the loss of the reflexes. The delirium, stupor and convulsions lasting twenty-four hours, during the febrile stage, point to acute polioencephalitis.

I am fully convinced—from clinical and post mortem observations—that the medulla, oblongata and pons are involved in this disease. Hence, the well defined and circumscribed paralyzed areas are best explained as indications of paralysis of the nuclei, of the left facial hypoglossal and accessory nerves. In other words, acute left bulbar paralysis. The marked hyperalgesia indicates that also the sensory nerves are involved.

LVII. Female. Aged 2 years, 9 months. Onset, September 8. Fever and vomiting the first day. Then apparently well until September 12, when she had fever, tonsillitis, restlessness, complained of pain in the big toe. Could walk, but there was marked twitching of the right extremities. In the evening, both arms and the right leg became paralyzed. Sighing respiration, somnolence, tenderness to touch, painful micturition. September 17, fever. Indistinct speech. Reflexes normal. Bowels have not moved in five days. Motions of right hand are feeble. Drags right leg in walking. September 18, gait and movements of right upper extremity normal. Speech normal. No fever. Reflexes increased on right side. September 30, cured.

DIAGNOSIS: Infantile paralysis and acute polioencephalitis.

This case presents a typical picture of acute polioencephalitis, though the motor disturbances disappeared completely. It is doubtful that the true nature would have been recognized, if it had occurred at a time when there was no epidemic of infantile paralysis in Stockholm.

LVIII, LIX, LX. Male. Typical symptoms of infantile paralysis.

LXI. Male, 3 years of age. Onset September 22.

Pneumonia in June, diphtheria in August, discharged from hospital for infectious diseases on September 11. Post diphtheritic paralysis of lasting 8 days. September 20. Right arm suddenly paralyzed, without premonitory symptoms whatever. September 25, flaccid paralysis of right arm. Pharynx and eyes normal.

December 7, paralysis and atrophy of the deltoid muscles of the arm, and supinator longus, but the other muscles of the forearm are normal.

DIAGNOSIS: Acute anterior cervical poliomyelitis. As a month had elapsed since he recovered from diphtheria, there is no ground for considering the sudden arm palsy as of diphtheritic origin.

LXII. Male, aged 10 months. Onset end of September. Abscess near the arms. Incised and drained under chloroform anaesthesia.

The following day, infantile paraplegia. No fever. December 13, atrophy and paralysis of both legs. Typical infantile paralysis.

LXIII. Male, aged 1 year. Onset October 1. Fever one day, then flaccid paralysis of lower extremities, muscles of abdomen and neck. October 16, inferior paraplegia.

LXIV. Male, aged 6 years. Onset October 6. Lassitude and malaise for a few days. October 6, restless, epigastric pain. October 7, right leg paralyzed. October 10, contractures of muscles of right knee joint. Cries when attempt is made to forcibly extend leg. Complains of pain in popliteal space.

Improvement began after two weeks. November 5, cannot move right foot, or stand on the right leg. Internal and posterior surfaces of right thigh tender on palpation. November 15, can stand on right leg when supported.

DIAGNOSIS: Infantile paralysis. Acute anterior poliomyelitis, polyneuritis.

THE ETIOLOGY OF INFANTILE PARALYSIS

I had for some time been convinced that infantile paralysis is an acute infectious disease, mainly on account of the symptoms and course of the acute stage. Nevertheless, my own experience did not seem to warrant the assumption that the disease was epidemic, like the majority of the acute infectious diseases. I had, however, in 1887, had my attention called to this possibility by Dr. Bergenholz of Umca,¹ who stated that he had seen 18 cases during July to November, 1881, in the District of Norbotten.

Seligmuller describes an epidemic [Gerhardt Handbook d. Kinderkr. Bd. V. 1, p. 100] observed by Colmann [London

1. In northern part of Sweden.

Medical Gazette, 1843, p. 143] during which 17 children under two years of age became affected, all within a radius of three miles. Seligmuller's reference is, however, incorrect. The author was Colma, not Colmann, and his original communication appeared in *The American Journal of the Medical Sciences*, 1843, Vol. 5, page 248, where he states that he saw ONE case [not 17] in "the parish of West Feliciana, La.," towards the end of 1841. The child was one year old, and was slowly recovering from an attack of hemiplegia. The parents told Colma that about ten similar cases had occurred in that locality. Colma regarded teething as the exciting cause, and named the disease "Paralysis in teething children."

However incomplete this description may be, it nevertheless indicates that an epidemic of infantile paralysis occurred in America in 1841, the first one recorded.

Cordier's communication in *Lyon Medicafe*, 1888, LVII, 5, 48, is of greater interest. During June and July, 1885, 13 children in the surroundings of Lyon² were stricken, and four cases terminated fatally during the acute stage. Although none of these cases came under Cordier's personal observation until one year later [he consequently never had the opportunity to study the acute stage] he recognized and emphatically pointed out, the infectious character of the disease.

The next communication is by Leegard, in *Neurol. Centralblatt*, 1890, p. 760, calling attention to 9 cases observed by other physicians in Mendal, Norway, during July to September, 1886.

I am not aware of any other epidemic, though several observers have noted two or three cases occurring simultaneously in the same locality, or even in the same family. [Seligmuller.]

In my opinion, the occurrence of the disease in Stockholm and surroundings during 1887 amounted to an epidemic. I have reason to believe that there have been other cases than those reported here, though, from my inquiries

2. Saint Foy-L'Argentine.

among the profession, and also from a study of the records of hospitals and clinics for the succeeding years, I think very few. It seems natural that the great majority of cases would come under observation at the pediatric clinics, as the poorer classes are mostly affected.

Although a number of the cases reported here have at first glance a great dissimilitude, they have, nevertheless, certain important symptoms in common. I wish to emphasize their simultaneous occurrence.

Not a single case occurred in Stockholm between January and May. During May there were two cases, in June one, and in July two. These two cases presented the typical feature of acute spinal paralysis. The ninth of August may be considered as the date of the outbreak of the epidemic, and in the following seven weeks not less than 30 cases developed, 24 in Stockholm, and 6 in the Archipelago [some on islands fairly remote from Stockholm.] The high mortality, as well as the morbidity, was striking. I have mentioned three fatal cases during the first few cases of the epidemic. I may add a fourth, that of a dressmaker, aged 20 years, who died after one week's illness.

The epidemic subsided gradually, so that only five cases developed during October, and two during November, then none until April of the following year, from which time until July, 1895, the disease appeared only sporadically.

During July, August and September, 1895, the disease spread in a rather curious manner. The first two cases occurred in the vicinity of Stockholm, one on June 24, the other on July 12. On July 15 the first case developed in Stockholm, and was followed by 15 cases within ten weeks, the last of which occurred in a child from the locality where the disease first broke out.

What are the causative agents of this disease? The exciting cause must be some specific infective agent, widely diffused in nature, but assuming under certain conditions, in certain localities, and at certain seasons of the year, greater virulence, and giving rise to epidemics, quite like the ordinary acute infectious diseases. This causative agent we know only in its effects, and this is true in many

of the infectious diseases. We assume that it is a micro-organism, whose toxins give rise to the changes in the nervous system. Probably it is a hitherto unknown micro-organism, but it is not impossible to think that some known pathogenic organism may undergo transformation in consequence of which its toxins may have a selective action on the motor ganglion cells. In this connection, I would like to call attention to the recent animal experiments conducted by H. Rogers. He injected intravenously into rabbits pure attenuated culture of strept. *Erysipelatus*. At the end of two or three weeks the posterior extremities became paralyzed and atrophied, and the animals died in from four to nineteen days after the initial symptoms. The autopsy revealed, in addition to the muscular atrophy, vacuolization and degeneration of the anterior motor ganglion cells, that is, an interior poliomyelitis simulating the pathological changes of infantile paralysis.

Similar results were at the same time obtained by Gilbert and Lion with cultures of *b. coli communis* [reported before the Soc. de biologie, February, 1892.]

Since then, Thoinot and Masselin [Rev. de Medecine, June, 1894,] induced anterior poliomyelitis in rabbits with injections of *b. coli comm.* and *staph. aurens*. At the autopsies these organisms were found in great numbers in the spinal cord and in the internal organs. Rogers, on the other hand, stated that in his experiments, the organisms had not invaded the spinal cord or the organs, and this fact he considers as proof that the toxins, not the body of the bacteria, produce the pathological changes.

Is the disease transmitted through contact?

Yes, there is at least such a possibility, though, in my opinion, infection through contact does not take place very often. The cases observed in 1887 and 1895 occurred mostly in widely separated districts, and do not indicate any such mode of transmission, with the exception of a girl, two years old, who was frequently brought to the clinic for treatment of gonorrheal vulvo-vaginitis, and possibly contracted poliomyelitis there. The occurrence of several cases in the same family is in favor of the contact theory. Cases VII,

X and XXVI illustrate this, and I would like to report another curious incident. At the Children's Hospital a girl, four years of age, who was convalescing from some other illness, was suddenly seized with unilateral convulsions, fever and stupor. The later course of the disease justified the diagnosis of acute polioencephalitis. A short time previously the same room had been occupied by a child which, at the time of admission, presented the symptoms of the acute stage of infantile paralysis, and who later developed the typical paralysis of acute anterior poliomyelitis. I do not assert that this child infected the later occupant of the room, but I believe that the same infective agent was active in both cases.

I have never observed any predisposing factors. Exposure to cold, lack of ventilation, heredity, or previous illness have, in my opinion, no bearing whatever upon infantile paralysis. Neurotic family taint has been mentioned by some authors, but its predisposing effect has never been verified in the cases under my observation. The children who have been affected have, for the most part, been perfectly healthy, and only one child has suffered previously from joint affection. Traumatism, as in case XL, can also be ruled out.

Predisposition is, however, still an unsolved problem, but the same is true of all other infectious diseases. Under predisposition certain factors deserve a closer study, for instance, age. As a rule, the disease attacks children of a young age, as is shown by the analysis of the 64 cases:

2½ to 6 months, 5. 7 months to 1 year, 15. 2nd year, 17. 3rd year, 13. 4th year, 9. 5th year, 1. 6th year, 3. 8th year, 1. Total, 64.

During the epidemic of 1887 the youngest child was two and a half months, the oldest 5 years. In 1895 the age limits were three months and 7 years and 9 months.

Males are more frequently attacked than females, as is shown by 15 out of 21 cases occurring in boys in 1895. On the other hand, from May to November, 1887, both sexes suffered equally, 22 boys to 21 girls.

While the majority of cases occurred among families of the working classes, there was no great poverty. Moreover, the richer classes were not spared, so hygienic conditions seem to play an insignificant role.

Both epidemics occurred at the same season of the year, late Summer and beginning of the Fall, and reaching its maximum during August and September. The atmospheric conditions were in both years normal for that season. The average temperature in Stockholm during the years 1859-1889 were July 16 C., August 15, September 11.3. The rainfall during July and August, 1895, was unusually heavy, but in that year the majority of cases occurred in September.

The Summer diarrheas cannot be regarded as a predisposing factor, as remarkably few cases of Summer diarrhea were reported during 1895 and the morbidity of 1887 did not exceed that of other years.

(TO BE CONTINUED.)

NOTES ON THE HISTORY OF PSYCHIATRY. XIII.*

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IN the February, 1910, issue of the *Alienist and Neurologist* I outlined a small program concerning these notes. Therein I started a series of comments, translations and bibliographical references pertaining to the study of the history of psychiatry. These have been continued at irregular intervals up to the present time. Other historical comments on past and present day aspects of psychiatry have been contributed to other periodicals, among them being "The Psychiatry and Psychiaters of the Augustine Age." [Bulletin of Johns Hopkins Hospital, Oct., 1908], "A Contribution to the History of Huntington's Chorea," [Neurographs, May, 1908], "Korsakow's Psychosis," [New York Medical Journ., Oct. 24, 1908,] "General Paresis," [International Clinics, 18th Series, Vol. III, 1908,] "Syphilis of the Nervous System," with an historical summary, [Modern Treatment of Nervous and Mental Disease, White & Jelliffe, Lea & Febiger, 1913,] "Dementia Praecox, an Historical Summary," [N. Y. Medical Journal, March 12, 1910,] "Franciscus Sylvius," [Proceedings of the Charaka Club, Vol. III,] and "A Summary of the Origins, Transformations, and Present Day Trends of the Paranoia Concept," [Medical Record, April 5, 1913.]

In my first contribution to the *Alienist and Neurologist* in 1910, I spoke of the valuable material on Hippocratic psychiatry, which was contained in the history of Friedrich, and these notes have just finished a translation of two of

*Continued from May, 1916.

Friedrich's chapters. The masterly study of Falk has also been translated, and I now present one of the ablest of the historical theses on Hippocratic psychiatry extant. This is the thesis of H. Nasse, *De Insania, commentatio secundum libros Hippocraticos*, Bonn, 1829.

Practically all of the older writers have used this study of Nasse.

This present thesis is probably a direct stimulus received by the younger Nasse from his father, Ch. Fr. Nasse, who was born in Bielefeld, and who was a favorite student of Reil, the discoverer of the Insula of Reil and who was a forerunner of his times, as may be gathered from the masterly biographical sketch of Reil published by Dr. W. A. White in the *Journal of Nervous and Mental Disease*, January, 1916, to which I would specially call the attention of the readers of this article. Nasse, the father, was physician to the poor in Bielefeld, and then became professor of the new clinic at Halle. In 1822 he was in Bonn interested in mental medicine and in 1818 he published a new journal devoted to psychiatry, the *Zeitschrift für psychische Aerzte*, which continued until 1826. With Jacobi, Flemming, Jassen and Zeller he also founded in 1838, the *Zeitschrift für die Beurtheilung und Heilung krankhafter Seelenzustände*, which lived but one year.

In the life of Dr. Hermann Nasse he tells us that his father taught him Greek and it is quite comprehensible that he should have had his attention turned to the psychiatry of Hippocrates by his father, who was actively engaged at this time in the editing of the *Zeitschrift für psychische Aerzte*.

This translation is materially the work of my friend, Dr. Wilfrid Lay and of my daughter, Sylvia Canfield Jelliffe, to both of whom I extend my sincere thanks.

DE INSANIA

Commentatio Secundum Libros Hippocraticos. By Hermann Nasse, Bonn, 1829.

INTRODUCTION

The teachings of Hippocrates concerning deliria are well known and have been systematically collected;¹ but the

brief treatise on his theories on insanity, which contained disconnected sections however few they are, is lacking to date, and so I think, possibly it would be worth while to arrange in one systematic order every thing about insanity scattered through Hippocrates' works.

Care must be taken, in handling the beginnings of sciences which expressly concerns us in collating the writings of Hippocrates, not to give them a deeper sense than they may have, not with the result that like others who consider Hippocrates, as a seer and think of his books as collections of oracles, we would take pains to show that from his time on nothing new has been discovered and reported in our subject. But on the other hand, far be it that we should consider him as worthy of less respect than is right; let us rather defend him against opponents than go over to their side.

Just as those statements which are found in Hippocratic books on insanity differ from the teachings of later writers, so already in the books of Hippocratics themselves it happens that there are found different opinions that show their authors to have been many and not contemporaries either. Their writings should be separated, the genuine writings of Hippocrates from the spurious writings of his disciples, and we shall draw much more from the latter than from the former. And so we have purposed whenever we cite Hippocrates, the book from which we have quoted. Furthermore, I have put first the citations from the genuine writings, and frequently I have shown in what respects these differ from the spurious. Yet when they agree, where facts are enumerated which are true and accordingly can belong to the original Hippocratics and later Hippocratics, I have omitted the dates. In so far as it affects theories, this distinction is of greater moment. Yet not even the earlier books are surely intact, but have been corrupted by various emendations of the Alexandrian school. If Sprengel² things that Galen is to be heard among all and that the sense which he gives to the aphorisms and dicta of Hippocrates is to be considered correct, because, being nearer his time, he can better understand him, on the other hand at any rate, we can not deny that the other ought not to be neglected,

the contemporaries of Galen, and chiefly he himself, were so full of theories that they desired everywhere to develop all things from them. Throughout, in his commentaries on Hippocrates' books, Galen speaks about humors in the body about the pituitous humor and especially about the yellow and black bile, which he considers the most important of all, and he passes at once right by the places which need critical explanation. Galen deserves praise, however, because desiring to discriminate between the genuine and the spurious books, he has traced back many statements that were interpolated later.

Before beginning our research, let us say, in order that the subject may be better understood, what ones of the Hippocratic books which are mentioned in our commentary are genuine and are to be accredited to Hippocrates, the son of Heraclides and Phainareta, who is called Hippocrates the second. Of those that we quote the following parts are genuine:

1.—Books I-VII of the aphorisms; 2.—Books about *dieta acutorum* [diet in acute diseases]; 3.—Books I and III on common diseases; 4.—Books on air, water and parts of the body; 5.—Books on prognost; 6.—Books I. *prorrhēt* [on predicting] [disease from symptoms]; 7.—Books on wounds in the head; 8.—Books on ancient medicine; 9.—Books on the nature of man; 10.—Books on *coac. prænōt.* of which the last two books, 9 and 10 are partly spurious.

Finally it seems that we would remind the reader, so as rightly to be understood, that we understand by the word insanity a general chronic alienation of mind and only if we say febrile insanity do we mean delirium with which words we think we express the Greek, as opportunity of more clearly understanding will occur later.

CHAPTER I.

Certain of the premises which the Hippocratics make about the condition of mind and body in a state of health.

The statements of Hippocrates and his school concerning the soul and its seat and connection with the body, however brief they may be, must be passed over before we can

gird ourselves to explore how the mind is alienated from its relation [affection] to the body. Suffice it at present to mention those which are necessary to the understanding of what is to follow. Almost all of these we can find only in the spurious books because a lector of the family of the Hippocratics collected more those which experience furnishes.

According to the Hippocratics³ there are four humors in the body from which originate diseases that are caused by no external power. These are phlegm, blood, bile and water, [phlegma, haema, chole, et hydrops.] Of these, blood is the humor which, if we regard the life of mind and body, is by far the most important and necessary to life according to the opinion of the ancient physicians. It takes to pneuma [the breath] through the lungs, and by it life is sustained, just because it is by far the warmest⁴ thing of all the members in the body. Just as for the life of the body, so also it was thought to contribute to the integrity of the mind, so that it is said, "the blood which exists in man contributes much and as some say everything to intelligence" [phronesin.]⁵ The changes of blood produce sleep and drunkenness, for they invariably change the understanding [synesis.]⁶ More about this in the chapter on pathogeny.⁷ They consider the cause, however, that produced such an effect as spirit [breath, pneuma,] because it was circulated with the blood and produced that clear perception and intelligence which they thought was disturbed by the humors.

This doctrine of the Hippocratics about the blood is of great importance because they believe that the distinction between their school and that of the Galenics depends on the following point, while to these the blood if of much less importance and the brain by itself constitutes the soul.

With the blood belongs the heart and when the pneuma comes into the left part of the heart, especially that which is said about the left ventricle of the heart is true. On this topic an author of a book which is entitled "On the Heart"⁸ says: "Here are the sources of human nature, whence

the life of man is derived," and a little later the mind is said to have its seat in the left heart.⁹

Another view is found in the book on disease, which does not exactly agree with the first, because an inferior position is there given to the heart, and the seat of intelligence or mind [phronesis] is placed in the brain, in such a way that there remains to the heart and the transverse septum [phrenes] nothing but the faculty of perception. The heart perceives, when any one is contracted with pain or any unpleasant sensation, and accordingly the body must shudder and be tortured, and the same thing happens if any one is affected with the greatest joy. Therefore it is shown that we recognize a false opinion with the heart nor does the privilege of intelligence belong to this nor to the transverse septum. A little earlier the author desires to show that the brain is a single organ in which resides the mind. "If the brain," according to his opinion, "is healthy, it shows us what is being done by the air. The air supplies intelligence, the brain is the communicator of intelligence." It knows that, which other organs supply and assuredly whatever wisdom and intelligence the spirit has is left to the brain. And a little later the complete function of the brain is pointed out in these words: "With the brain then chiefly we realize and understand, we hear and see and learn, discriminate and perceive." In the beginning of the essay on insanity, which is found among the Epistles is the following brief statement: "In the brain is the business of the mind."

Such doctrines as these are not taught in the genuine books on the brain; wherefore it may be inferred that those books from which we have just quoted opinions were written at a much later date. The only passage which is found in the genuine writings about the relation of this organ to the mind, teaches us that the brain and indeed the head most easily perceives wounds in the flesh and the bones because there are found the thinnest bones.

Besides these already mentioned opinions about the origin and seat of the mind, others are found in the spurious books of the Hippocratics, according to which the mind

[psyche] is made of the mixture of fire and water and indeed wisdom is produced from an especially wet part of fire and an especially dry part of water. Thereupon, as we shall see later, rests the more elaborated theory of the origin of insanity.

CHAPTER II

General relation of body and mind in its diseases, according to the Hippocratics.

From these teachings which we have quoted from the Hippocratic books, it follows, as is generally known, that the mind and the body are closely bound together, and from its good strength comes sanity and from a diseased body the mind too is affected out of sympathy. So Democritus in letters to Hippocrates: "By disease of the body, intelligence also, affected as it is through its close relationship, becomes seriously diseased." Specific mention is made of this condition where an insufficient amount of phlegm and bile is mixed with the blood. The place is pertinent also to our topic and worthy of mention where the manner in which epilepsy passes over into melancholia is pointed out. For then when epilepsy, which is called an affection of the body, affects the mind, insanity [i. e. melancholia] results; melancholia therefore is produced by sympathy through a disease of the body.

Although by the careful observation of states of mind on the part of the Hippocratics which he appears to have instituted from returning sensations of former sickness, on watching and observing them and from regular rules adopted for watching affections of mind, the knowledge of mental diseases reach that point with them that the phenomena of affections of the soul were considered to come only from the body; nevertheless, on the other hand, both the knowledge of the human body and physiology since its foundation anatomy was so insecure, could not help resulting in their explanation as to the manner in which affections of the mind depended on the body, being varying and hypothetical. So also their theories of bile and phlegm, of fire and water and air in the veins are easily excusable.

From that point of view, as to how each affection of mind depends on the body, he easily elucidates that the former on the nature of insanity as a disease sent from heaven ought to have been done away with. Nowhere in Hippocrates is insanity ascribed to the wrath of the gods; nay, rather, the author of the book on that subject desires to show about the holy disease that it, quite as much as all the others, is a disease of the body and so can not lead to any exorcism in it. Just so the disease of the Scythians [among whom on account of the sterility of a man, they considered that many have been clothed with the personality of women] is not shown to be of divine origin; "for all disease is of divine origin in a certain sense, nor can anything happen contrary to [citra] nature." Thereafter the origin of this condition as explained by the manner of living of the Scythians.

Plato himself thinks otherwise about the sacred nature of mania, as can be read passim in his works. For he deems important the association between the words *mania* and *mantic*, both of which are derived from *mainesthai*, and accordingly he thinks that mania is associated with the faculty of divining and for this reason another kind of mania can be a gift of the gods which may bring many blessings to men.

He very clearly brings to light from the explanation of reason, from which insanity is accustomed to arise, that the cause of it, considered as always situated in the body by the Hippocratic school. With the most important organs of the body disturbed, e. g., the brain, the heart and very likely the blood, and without therefrom following an affection of the brain, mania and melancholia according to them ensue. For the brain, as they say, in an attack of insanity has a very great power. Just as the heart when affected by torpor produces an alienation of mind, so the excitements of the soul affect it very strongly. "The heart and the lungs are affected by wrathfulness and are drawn together into themselves and draw a humor and heat into the brain, rest makes the heart languid." The heart and the transverse septum

are named parts that are "liable to delirium and mania" in a passage from the book "*De Rebus Petito*."

CHAPTER III

On the part of the soul which is considered to be affected in insanity, and on the general terminology of insanity which follows therefrom.

In the books of the Hippocratic school no such passage is found as in Galen, which defines what parts of the mind in insanity are chiefly and primarily considered to be affected, still less how the various forms of insanity are distinguished according to the affection of the soul. One may rightly doubt whether Galen's division of the diseases of the soul which depends upon the lesion of the faculty of imagining, ratiocinating and memory, belonged already to the Hippocratic school. And if we turn our attention to the psychologists of our own times, who have had till now a great controversy as to what is the primary characteristic in insanity necessary to all its forms, it is no fault of the Greeks that they have held aloof from explaining this difficult matter, there will come to us in some way some conclusion from the wealth of statements constantly made about insanity, that we may root out what opinion the Hippocratic school had [as well as all the Greeks of that time] about the nature of insanity. For, as we shall more fully treat later, about this matter, *dianoia*, *phrenes*, *gnome* were what, as they thought, became ill in the insane. If this is true, he shows remarkable agreement with the doctrines whose truth some of the psychologists and physicians of our own time have convinced themselves, who think that the condition of mind, intelligence, intellect, and reason, is primary and common to all the insane. Galen, in the words already cited, teaches us that the same faculty of mind is meant and *gnome* and *dianoia* mean exactly the same. And this is proved by that use of earlier writers and of the genuine Hippocrates himself. So in his *Aph.* VI. 6. *gnome* means nothing more than ratiocination or mind, and narcosis of the *gnome* means the same as narcosis of the *dianoia*, namely a dullness of the intelligence,

a torpor of the mind which seizes invalids in fevers. The gnome and the dianoa can be disturbed both acutely and chronically. The mental affection that follows, of the mind if injured, is designated by the words anoia and paranoia by which this entire kind of insanity is included. So also the gnome is troubled not merely in chronic insanity but also in delira: the nousos of the gnome is also the same in the Aphorisms as any disease of soul [mind]; and the gnomai tarachodees mean the same, viz.: disturbances of the mind, even, indeed it seems to me, when the talk is of chronic disease. Not only in one passage in the book about aliment [which seems to be one of the latest Hippocratic books] are the phantasies mentioned besides the intellect; but in no way is it said that their affection is found in insanity nor is there need of it, for we may at least draw a general conclusion from the position in which these words occur; because in it the symptoms and even the diseases are placed with remarkable lack of order. Therefore it would be advisable to decide whether the Greeks, especially in our writings, thought that the phantasies were related to the mind. But if the affection of mind of melancholics is, as we have heard, placed by them only in the mind we can not deny that those suffering with melancholy, are tortured severely with phantasies as if affected with daimonomanis, as described already by the Hippocratic school. It may be suspected that the phantasies are related by them to the dianoa.

As in melancholia, so even in delirium, the Hippocratic school seems to have held that the faculty of the soul, i. e., the intellect [dianoia] was suffering, which can be deduced I believe from a passage in the book on Common Diseases, VII, in which a sick man about whom it had just been related that he had been in deliria for the past days, is said to have shown similar symptoms as far as pertains to intellect [dianoia]. And so even the affection of the soul which is at the bases of delirium is placed in the mind [dianoia.]

Much more rarely than dianoa and gnome, the phrenes are said to have been affected, although they mean the same thing according to Galen, as nous and dianoa. Phrenes

are first *praecordia*, which are named *diaphragma* at other times and later, and are, according to the ancient Greeks, e. g., Homer, the seat of the mind, with which is connected this word *phronein* [to have taste] wherefore Aristotle says "the *phrenes*, as they share in knowing." [*phronein*.] Also in the writings of Hippocrates the second, [if I may name him thus], the *phrenes* are spoken of as the transverse septum [as also in later writers] but also, [which especially interests us] they mean the intellect and so are used for the word *dianoia*: for *parallaxes* of the *phrenes* undoubtedly signifies an alienation of the mind. When therefore the mind so placed in the transverse septum [*phrenes*], then the intellect is called *phroneses*, which produces *aphrosyne* if it is disturbed or taken away. By this name both *mania* and *melancholia* and folly appear to be understood. Generally moreover *aphrosyne*, like the Latin word *folly* [*imprudential*] is used more of those men who with sane mind, act rashly and with lack of foresight and intellect, than about the insane. For true *aphrosyne*, the loss of all foresight and intellect is not observed even in disease, and the Greeks did not understand by this word that condition of soul which could be designated in another manner, viz. as loss of mind [*amentia*]. So *alpha privative* when added to names of faculties of the soul always denotes a condition above the average, and so can not well express the nature of insanity. Nor did the Greeks indicate the general condition of insanity with words made with the *alpha privative* but used for this purpose words to which were prefixed the preposition "*para*." Such words as *paraphrosyne*, *paranoia*, *parakope*, well express a deflected direction of mind, a deviation from the normal condition, and alienation which lies in the preposition. What *parallax* of the *phrenes* above mentioned expresses is sufficiently designated by *paraphrosyne*, by virtue of the preposition, the force of the verb *allassein* [a wandering from true condition,] is already indicated by the word "*para*." The Greeks were not accustomed to add a faculty of mind to signify an alienation of the mind, thus *pakryein* [whence *parakronsis*, *delirium*] which properly is to depart from a straight path, is wont to be used every-

where of a febrile alienation of mind; it is the same, therefore, as to be in a delirium, So we also: Our "*Irreseyn, Ver-rudktseyn*" always refers to the mind. The expression "*wander in mind*" therefore means a peculiar condition in affections, the same viz. that is common to all the insane, chronic and febrile.

Since the *dianoia* is, according to our research, the faculty of mind which is considered by the Greeks to be sick in all insane persons, and since then *para* added to names of the soul indicates that change of mind which looks towards the nature of insanity, it can easily be inferred which term, is broader than all the others. How true our premises are is shown by the use in the Hippocratic books of the words *paranoia* and *parakope*, which include both delirium and acute and chronic melancholy and mania. So *paranoesthai* is used of one delirius on account of fever; further it is added in so far as pertains to *paranoia*, that phrenetics are like melancholics. If the word *paranoia* had not the broadest application it would not be proper to say that sometimes it became *maniodes*. By the same term is designated that form of melancholia occurring among girls which our contemporaries call *daimonomania*. Then also, when the insane are harrassed by black bile, those whose blood, bile and phlegm is corrupted, and whose mental affection is surely called melancholia by the Hippocratic school, they are designated merely by the generic term *paranoia*, although some of them become violent themselves.

Just as broad as the word *paranoia*, is *parakope*, which seems to enjoy the same meaning, especially in the *Epistles*. It appears that the notion of that extends more widely than mania for it is not only related in regard to it that it rises from too copious [redundante] bile, and it is used for all chronic insanity [manie] as well, so that it seems to include besides mania even melancholia. Furthermore the verb *parakopein* occurs, for "*to be delirious.*" And there are passages in which *parakope* is used with the meaning of delirium.

At the end of this chapter let us notice that the words *paranoia* and *parakope* are found only in the spurious

books, and all our illustrations have been found there. We shall see later how much this contributes to the definition of the concept of mania in the genuine books.

CHAPTER IV

ON THE TERM AND CONCEPT OF MANIE

I. Manie, febrile insanity.

I never quite knew how Galen can say that the Hippocratic school always understood by *mainesthai* and *manie* a violent aberration, a delirium without fever, [as Gorraius and Foesius also explain it], until I found passages where the talk is about *mainesthai* which certainly looks towards persons seized with fever. In the Aphorisms also, *manie* is read, which is connected with an acute disease. About this Aphorism, however, we must admit that as it is now read it is not quite clear to the physicians of this time. For it can not very well be explained how it can come about that if after wounds have been affected in the posterior part, swellings, tumores that have arisen soon vanish, convulsions and tetani, but if in the anterior part, insanity, dysentery, etc., may result if the swellings are red. So we must be careful not to deduce too much from the Aphorism but pass to the spurious books, where our statements are more clearly proven, e. g., the wife of Theodorus who died on the seventh day, was seized on the sixth day of her sickness with mania, [*manie*] after she had previously been delirious. Much more often they are accustomed to use the verb *ekmainesthai* than *mainasthai* about violent deliria, [and *hypomainesthai* to be mildly raving, occurs]. Very often the adverb *manikos* is added to the deliria as a more accurate definition of them.

Mainesthai does not in itself extend to all those in delirium in fever, but what is the condition which renders deliria *manika*? There is a high degree of unrest, if it comes to extravagant folly. Let two passages here suffice to prove this, by mentioning which we shall make the matter quite clear: That a violent and suddenly arising alienation of mind, restless, though silent, can not be called *manie*

follows from the fact that sufferers from such an affection can still be turned to fury [furorem]. Patients who in two passages in the books on common diseases are said to have been seized with mania, shout, heap reproaches on bystanders, attempt to raise themselves and appear to grasp in vain at something with outstretched hands.

II. MANIE—chronic insanity.

Even if manie in many passages has the meaning of delirium in fever, yet in others it has an opposite meaning much broader. Already from the fact that delirium which [though only in the spurious books] is opposed to paraphrosyne it follows that chronic insanity is meant. Likewise mainesthai is opposed to the aforementioned paraphronein, where nothing but chronic raving [furorem] can be meant, by the same meaning that Galen [as we have heard] attributes to this word. And yet Democritus, if he had been otherwise insane, would have manifested the symptoms of melancholia as Hippocrates says when called to him by the Abderuted; yet they speak of his mental condition as raging [mainesthai] though it was no less than raving. In the same epistles a passage comes to us which if we examine it in a logical manner, seems to show to us that melancholia is subordinated to insanity.¹ Of which passage the following are the words: He does not suppose that the death of man or disease or parakope or manie or melancholie or sphage or other evil are unsuitable objects of mirth.

As, evidently, disease [nousos] is a word of widest significance and parakope immediately following it [which as we have shown above is used for any mental alienation] enjoys a much wider meaning than manie, then it seems we must conclude that the concept of manie is wider than that of melancholia.

Yet we should be careful not to infer too much from this passage, for the word which is placed last, i. e., sphage, is connected with descending climax and so is at variance with logical thinking. Yet not only in the spurious books has manie this signification but manie is used even in the Aphorisms except that it is placed for raving, and also for chronic insanity, so that we read *manie* in those passages

where we should according to the sense expect that *melancholie* would have been put there. On this change of terms there will be more later in Chapter V. Since moreover [as Aphorism VII, 5, teaches us] *ekstasis*, i. e., excess of raving which is a symptom of mania, can be a relief, it is more than clear that manie is very different from acute raving and is nothing but chronic insanity. It follows from this that we can hardly defend the hypothesis which a learned physician has formed recently, namely, that *mainesthai* even when used of chronic insanity, always in Hippocrates signifies that state of being insane which happens in paroxysms, while *melancholia* is continuous insanity. This *ekstasis* which suddenly overwhelms humans, it was thought, was of melancholic origin and could be correlated with mania. From the examples taken from the Hippocratic books we shall show more fully hereafter that the Hippocratics and the ancient Greeks did not always connect the idea of raving, even the chronic kind, with the meaning of manie. As to the other Greeks let us cite only Xenophon, who represents for us Socrates conversing on manie. Socrates calls only those *mainomenoi* who do not understand what the crowd understands, e. g., Socrates goes on to say that a man is mad [*insanire mainesthai*] who thinks he is so tall that he has to bend over when he enters the city through the gates, or the man who thinks he is so strong that he can carry houses and can undertake other feats of such a nature that other men deem impossible. And so manic means to him that form of insanity which our contemporaries call *melancholia*. Such examples of insanity, fixed with thinking as they say, were, e. g., one insane person thinks he is a sparrow, another a potsherd [*fictilem*], another a god, are related by Coclus Aurelianus, and he refers them to a form of raving, not at all to *melancholia*. Even in a later time they considered manic a chronic disease not accompanied by fever. So Aretaeus thought there were in form many modes of raving, but only one in kind: "For there is in all a long standing mental alienation lacking fever. For if there is fever, [whenever connected] it happens, not because

of the essential nature of the raving, but by some other chance.

Although, from other statements we have made, it is clear that the significance of manie has been very wide, yet we do not intend to deny that just as it signifies raving in deliria, it has signified even in chronic insanity that species above all others which now we understand by the term mania. For could anyone say what ta manika signify if he is opposed to ta melancholica as in Aphorism, III, 22 p. 1248. Ta melancholica surely do not signify an atrabilious disease generically, because the words which precede, e. g., dysenteria already denote atrabilious diseases. Wherefore it may be suspected that ta manika in this passage indicates generally a raving insanity both acute and chronic. But this explanation is not much more than a hypothesis, not supported by strict arguments. Nor is it hardly in our power to prove with suitable arguments that anywhere in the Hippocratic books, except in a few passages, that manie and mainesthai are to be understood of a true nonfebrile raving. For besides the fact that mention of raving is rarely made the condition of raving persons is not even always designated by this word manie. Later writers on this subject contribute nothing to the better explanation of the mention of chronic raving in the Hippocratic books; for they have a varying meaning of manie; even earlier, others sometimes considered insanity generically as including melancholis, considering mania as it were, a part of it. Wherefore we must return to Hippocrates himself. We have quoted that passage from the book on diseases, I, p. 460, in which are the following: "When those persons affected by an atrabilious disease, their blood being corrupted by bile or phlegm, are mentally alienated, it is not necessary that they all become melanchloics, for some even become raving. So from this word mania which is so far more specific than melanchloia [paranoia] we infer that raving is doubtless to be understood. Fever is hardly treated there because a little later phrenetics in all other respects different from them are compared in a certain manner with these melancholics. Among these passages in which manie seems

to have been placed for the old raving without fever, only one from the book on the system of living is to be referred to. For when mildly raving persons become slightly excited [hot] without doubt a true raving will arise; we can not assert certainly whether entirely free from fever. This signification of manie, raving, to-wit is the more worthy of mention because a little earlier, the insanity of those persons who, called aphrones and embrontetoi are referred to us among the demented and melancholics, is called a slower manie. This being the case, since manie is so variable a concept now of [febrile] raving now of chronic insanity, manie in general, especially in the genuine books, which lack such a generic terminology of insanity, is quite likely used for mental alienation. Why, does not appear to be of great importance that in the essay on insanity [the account about manie] to which that title is given by Democritus in the epistle to Hippocrates [whereby it appears that it was at any rate not added later] besides chronic insanity, even febrile conditions, i. e. deliria and forms of insanity which make one neither vociferous nor disorderly [tumultuerantem] nay more such an affection as our contemporaries term melancholic are treated?

And so the manie of the Hippocratics is not at all the manie of our contemporaries, but signifies merely a raving delirium, not an ekstasis [in which the patients should not show a tendency to disorder] but merely, more broadly speaking, insanity, nay perhaps even generically a mental alienation. We must then agree with Galen and Mercurialis, the latter of whom says: "As Galen writes, this word mania [Sc. in Hippocrates] signifies sometimes melancholia, now mania, now all deliria."

CHAPTER V.

ON THE NAME AND CONCEPT OF MELANCHOLIA

I. On its very wide application.

The melancholic disease [melancholike nosema] to the Greeks and among them to Hippocrates also was far from signifying always a disease of the mind but rather used to

include various morbid conditions of the body which seemed to come from one and the same source. But we can not adduce any better author than Galen, who writes much about melancholic diseases arising from black and yellow bile; he enumerates among melancholic effects besides cancer elephant [iasia] scabies lepra quartan fever, even that affection which is called by the peculiar name, melancholia. This peculiar form of melancholy is, however, an affection of the soul. Galen did not himself invent this division and denomination of melancholia but even before him the Hippocratics taught the same thing about melancholia nor is this to be proved merely from the spurious but even from the genuine writings. So in the Aphorisms, melancholic diseases [originating from black bile] are read as *ta cholika noseinata* from which at any rate mania arises by metastasis [transition]. So in Aphorism VI, II [unless you should illogically wish to read *phrenitikoisi* for *nephritikoisi*] under the *melancholkoi* are to be understood, not merely the crazed [mente capti], but sufferers from atrabillious disease and among them in a narrower sense even the melancholics. Furthermore if we are told that paralysis of the tongue or other parts of the body which suddenly seizes any one, originates in melancholie it is patent that it signifies here nothing but atribiliar disease. It is superfluous to cite single passages from the spurious books for you will find hundreds of such. Be these enough: the book on air, water and places, p. 288, v. 6; book on manner of living in acute diseases, p. 404, v. 6; book on affections, p. 325, v. 21; and the third book on common diseases, p. 1090 G. In regard to these passages let me note that melancholie is wrongly rendered by the translators as *atra bilis* [black bile], as Lory contends against Sennert. Yet in this I think he comes near the truth because melancholie is to be distinguished from *melaina chole* [black bile], mention of which is made even in earlier books, of which the latter signifies the material of the black bile and the former the affection which causes it. Others go beyond bounds if they say that all the passages in which Hippocrates speaks of melancholics apply not only to mentally alienated persons but to

those affected with atrabilious disease. It is a hard matter to distinguish whether the persons harrassed by black bile are to be classified with the melancholics, or only these, or not such cases, or only those affected by such a form of atrabilious disease who are far from insanity. One could easily, e. g., object to us because we did not include in the description of individual cases a mention of Adamantus who is called a melancholic. We are told that after taking a large dose of euphorbia, he from time to time threw up in a black vomitus, even onions, what he had one time eaten. In reply we should answer that Adamantus seems to have been little affected in mind but harrassed with black bile, and had perhaps become splenetic [lienosum] because it appears from the fact that he suffered from black vomitus and then used spurge, a remedy then much in use against diseases of the spleen and black vomit.

Melancholia was therefore with the Hippocratics an affection which sprang from black bile most often, rather a diathesis than a disease. Temperament and constitution limited melancholy. If a melancholic man was mentally alienated, he was said to suffer from melancholy in a more specific sense, whence it followed that for them melancholy was not a certain and accurately defined form of affections of the mind, although it should not be overlooked that those harrassed by an atrabilious diatheses [melancholikoi] generally, if their minds were affected, were more inclined to melancholy, i. e., to insanity with depressed soul [sadness and fear] than to raving. This is corroborated by daily experience, and this is an observation which throws much light of the division of diseases of the mind among the ancients. For now we can not object that mania in the sense of the Greeks can even be called melancholia. We do not wish to appear to have brought the minds of readers to anything new, because we have found a passage in Aretaeus which agrees with our opinion. Like Galen, he calls melancholia a part of melancholic affections, which may be recognized by symptoms of the body, e. g., flatulence and belchings, etc. And immoderate anger according to this author, and furious wrathfulness and savagery are found united with melancholia,

nevertheless these persons mentally affected are called melancholics because black bile is the cause of their disease.

According to the supposed reason which often does not manifest itself even in the symptoms of the body, from which otherwise it is wont to be supposed [supponere], it is a hard matter to distinguish diseases, e. g., whether one is raving from black bile or for some other reason. It is a wonder that the ancients did not admit it more often that a diagnosis was impossible or else difficult. In only one passage, as far as I have found, in the Hippocratic books and that in the book on common diseases [in two passages, in almost the same words in regard to the same invalid] their author adds the word *dokeon* [supposing] so that it appears he was not sure whether Timocharis, his slave, was a melancholic; and for this reason he says: "The servant of Timocharis appears to be a melancholic."

Celsus seems to have already clearly seen this phantom of black bile, for when he speaks of that kind of insanity which is clearly the melancholia of the Greeks and even the chronic form, which sadness accompanies as a characteristic mark, he adds, "which black bile seems to produce."

II. *Melancholica ecstasis.*

As soon as bile seizes the body of the brain and there abounds, according to Galen, men begin to lose their senses. [desipere]. If this happens suddenly that form of melancholia which is called *ekstasis* melancholike results. This acute form joined with evident excitation has nothing in common with the chronic, which shows itself in fear and sadness. Almost all the *ekstasis* whose symptoms we shall point out below in Chapter VII was held by the Greeks to be of melancholic origin. Originating in fever, it easily passes into *phrenitis*. If the word *melancholikon* is added to the deliria of fever a violent motion of the soul is meant, even if it is not named *ekstasis* for *parakronsis* can become melancholike. The most violent and raving motion of the soul which is named *theriodes* differs only in degree from, nay even is, melancholic ecstasy. But Hippocrates if he wishes to designate the highest degree of ecstasy uses only the adjective *theriodes* and omits the epithet *melancholikon*.

According to Galen, wild ravings [deliramenta] can exist even apart from fever; and in the Hippocratic books also, fever appears not absolutely necessary to melancholic ecstasy.

This feverish loss of senses [desipientia] is called wild [ferina] because those troubled with it, [as Galen remarks on the passage cited from the *coa. prae-not*] standing in the manner of wild beasts, attack [others], bite and kick.

Phrenitis is, according to the Hippocratic books without doubt, different from this melancholic ecstasy, for the latter can pass into the former [if tremor or fever comes]; although Galen explains both conditions from the bile which takes hold of the brain. Phrenitis, I am convinced, was an enduring state and continuous, but ecstasy is a fleeting, transient one, which, advancing from fever and suddenly setting in, increased in violence after it is united with fever, but when continuing a long time can constitute the beginning of phrenitis. The fact that this suddenly arising and violent motion of the soul is called melancholic melancholicos existasthai [arising melancholically] comes only from the theory of disease, and with no theoretic epithet it is also the same as is in other places called *oxeos existasthai* [arising acutely]. On account of this difference which exists between melancholic ecstasy and phrenitis, I think that even Jacotinus is in error, who thinks that the third form of phrenitis, according to Hippocrates, is the *maniode*, i. e., melancholic.

Doring contends that the melancholic ecstasy in the manner of delirium, because it always occurs in the same subject, is like melancholia; but we shall later show that this view of melancholia is wrong, so his view of ecstasy can not be defended.

We are forced to admit, that melancholic ecstasy thus defined, since it is rather a form of delirium, is really outside of our research and no objection can be made to Doring, for that reason, because he has handled it in his writings on deliria since it seemed necessary to exclude it from the later portion of our commentary.

III. Chronic melancholia.

Although, as I think I have amply shown the melancholia of the Greeks can involve man in various forms, because

melancholia is distinguished not according to the diversity of its mental alienation but according to a cause inferred from the appearance of the body, yet I wish to be far from contending that the Greeks had, in distinguishing melancholia, no system of mental signs, but rather, as already stated, even the melancholia of the Greeks, however widely the idea of it has spread, it naturally ought to show itself under a certain form of insanity. There are then certain signs of the soul, which by their presence indicate chronic melancholia. So the well known Aphorism of Hippocrates is to be understood. If fear and depression [*dysthymie*] lasting a long time still continue, such a state is melancholic. Some of the more recent wrongly contend that Hippocrates desired in these words to say that sadness and fear long continuing are always necessary symptoms of melancholia; for it follows neither from that Aphorism that these signs are present in every case nor that from them the name of insanity can be attributed to melancholia. Both on account of our stricter sense of melancholia, and because so often melancholics are found to be sad and apprehensive it is evident to us what led them into this error; the truth of which is vouched for even by the observations of the ancient writers. Even in the Hippocratic books a melancholic is described as sad, whatever he does. The author of the *Epistles*, calls Democritus a melancholic, not a maniac because, solitary, taciturn, loving loneliness [*desortorem*], he shuns as foreign the sight of familiar things. To this account is added many such [symptoms] accompany melancholics. Galen also agrees with these, calling melancholics sleepless, of gloomy countenance, and unreasonably harrassed by worry and ennui [*animi molestia et taedio*]. Later writers designated diseases of the soul more theoretically, yet they considered fear and sadness signs of melancholia. Arculanus of Avicenna, to mention but one writer, says: "Melancholia is a perversion of judgments and reasonings from their natural course to irrationality [*corruptio*], fear and spite [*malitia*]."

Yet we meet in the Hippocratic books an accurate description of a disease called *phrontis* which as far as

symptoms go [as we shall see in Chapter VII below,] is not only called melancholia in the sense of contemporary writers, but is considered such in the manner of the familiar Aphorism, yet the writer uses no other word for it than the word phrontis although in it the sufferers are harrassed by the greatest depression of soul, as the name phrontis itself indicates which is only anxiety and sadness. Why, then, if phrontis is considered a characteristic symptom of melancholia, does this symptomatic name satisfy the author, so that he does not call it melancholy? This can, in my opinion, be very well explained in such a way as not to be inconsistent with the Aphorism. For melancholie, a word of too little connotation, used for a disease of the soul is for that reason too uncertain and ambiguous.

To speak briefly, this is what I desire to show: namely that that form of melancholia was well known to Hippocrates and his school, which is now so called in a narrower sense, and they distinguished it by sadness and fear, yet not every melancholia should, according to their view, be accompanied by these [symptoms.]

VI. On the distinction and relation of mania and melancholia.

Any one reading Cicero in the Tusculan Disputations can not fail to be quite surprised when he says that "what we call raving, they [the Greeks] call melancholia," nor would this disturb me any less if I did not see what the melancholia was to the Greeks, and did not have the use of the Latin word furor [raving]. For only by such a view is the obscurity surrounding this passage dispelled. I know very well what melancholia was to the Ancient Greeks. Romans entirely lacked a word that should mean melancholia in the narrower sense. For the word insanity had a more generic meaning, amentia and dementia indicate a mental lack, a defect that affects reasoning power, a condition, therefore, that does not at all correspond to the melancholia of the Greeks. For this latter, which can be accompanied by the greatest raving, consists particularly in a vitiated power of imagining. What word, then, should they use? Furor [raving] comes nearest to melancholia. Furor seems

then to have had a wider application than merely to signify a raving state, i. e., of raving persons but was used for the mania of the Greeks. So also at a later date, Caelius Aurelianus gives this meaning to the word *furor*.

Even if we desire to explain in this way these words of Cicero, that they may not lack the correct sense, yet we do not like to give a chance to anyone to accuse us of not being willing to make a distinction between the mania and the melancholia of the Greek writers. Most of all we should defend Hippocrates from those who object to him for confusing mania with melancholia so that manie has not been used where we should look for melancholia in the Aphorisms. Let us examine therefore those passages which give grounds for such accusations. One is Aphorism VI, 21, on which Galen notes "Hence he calls it mania, which is properly called melancholia" not that which is named by bile, raving. "In Aphorism VI, II, Hippocrates had said "haemorrhoids are an advantage when coming to melancholic states." This is true of all atrabilious states, to which haemorrhoids often do come, and when they have begun other conditions decrease as may be daily observed. Specifically also in Aphorism VI, 21, the topic concerns those troubled with black bile who are mentally alienated; he says: "Such people are freed from insanity [mania] by hemorrhoids." If he had said *toisi melancholikoisi* [those suffering from melancholia] again, for *toisi mainomenoisi* [those suffering from mania] it would not have been clear, and would have merely indicated a closer definition which Aphorism VI, II, shows. Now after reading the Aphorism which is a little ahead of that, it is not at all obscure or superfluous, for where he is talking about haemorrhoids, an affection really atrabilious, any one who is the least bit acquainted with the Greek medicine of that time can clearly see that by manie, a melancholic insanity is meant. It is then, the same principle that we have called to our aid in explaining the word *phrontis*. We shall more clearly understand in examining Aphorism VI, 56, what cause lies at the bottom of this change of words. The result is the same as in the quoted manner. In *melancholikois* every form of chronic insanity

that occurs was called melancholia in a more specific sense by Hippocrates. What would have been the sense if he had said: "In melancholics melancholia arises with the coming of haemorrhoids." Nothing except that mania could have expressed insanity. The Hippocratic writers who wrote the spurious books, used besides manie, a still more generic word for insanity, viz. paranoia, which the genuine Hippocrates did not use yet.

It remains to weigh carefully what Doring said about the distinction between melancholia and mania in the Hippocratic books. For among other matters he contends that a melancholic ecstasy is like a chronic melancholia in that the patients in each rave about the same matter, but in mania there is no trace of reason left, so that insanity can not inappropriately be spoken of as about all things or special things. But he withholds his proofs. And the view is not indeed his, but Boerhaaves, who even in the Aphorisms aid: "Melancholia is called by physicians that disease in which the patient raves long and continuously without fever fixed always on one and the same thought." This he transfers to the Hippocratic books. Anyone can prove this from those writers, but not from others. We have already mentioned Xenophon and Caelius Aurelianus, e. g., who have handed down stories of patients fixed in one thought, and they think all of them pertain to manie or raving. Aretaeus alone of all the ancients makes a remark about melancholia, and he is probably the author of the thought. For he says in regard to melancholis: "It is the mental disease [athymie] on one phantasy."

We shall at the end of this inquiry into mania and melancholia, briefly gather what is to be inferred from the preceding chapters. Mania and melancholia in the Hippocratic books are not coordinate concepts, but in proportion as they are taken in the broader or narrower signification, either includes the other, so it is not at all necessary that they each in turn exclude the other. Mania is generically put for chronic insanity accordingly including melancholia. In this signification mania can be independent of raving in those that are seized with fever, however, it always indi-

cates a raving condition. Raving sometimes shows itself in the form of melancholia, for all melancholia is insanity which seemed to the ancients to have arisen from bile; but first is found that chronic form of melancholia which is especially characterized by sadness and fear. The acute form, i. e., ecstasy, is usually raving, and exactly the opposite from the former. See how closely connected are these two kinds of insanity!

64 West 56th Street, New York.

(TO BE CONTINUED.)

* Continued from May, 1916.

1. cf "Hippocrates Doctrine of Psychoses," Doctors dissertation, E. H. Doring, Marburg, 1790.
 2. cf. Versuch einer pragmatischen Geschichte der Arzneykunde, Halle. 1821. Ir The 1, p. 368.
 3. Book on Diseases IV, p. 498.
 4. Book on Flesh Sec. III, p. 250.
 5. Book on Diseases, I, Sec. V, p. 460, v. 37.
 6. cf. about flatulence, p. 30. the changes of the blood changes the intelligence.
 7. Chap. X, below.
 8. P. 299 Ed. Foes.
 9. Ibid. v. 57: Gnome gar he tou andropou pephyxen en te laie xoilie.
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SELECTIONS

CLINICAL NEUROLOGY

REVACCINATION NEURALGIA.—Van Wayenburg relates that during the recent extensive revaccination of the adult populace at Amsterdam, a number complained of severe neuralgic pains starting in the back and spreading to the stomach and abdomen. They were like the pains of extensive herpes zoster, without the eruption, and in some cases were accompanied by vomiting. He was unable to discover any tender points. This neuralgia developed exactly on the fourteenth day in most cases, and lasted for five or six days, leaving merely a little lassitude. The puzzling syndrome suggested kidney or gallstone colic or a pancreas affection. He has been unable to find any record in the literature of this revaccination neuralgia.—A. M. A. Jour.

NEUROTHERAPY

CALCIUM IN EPILEPSY.—Dr. John Bryant (in Boston Medical and Surgical Journal, October 7, 1915), after discussing the metabolism of calcium, asserts that the diet is very apt to be deficient in calcium. Analyses of brain substance have demonstrated the presence in this tissue of less than the normal amount of calcium, in certain disorders marked by hyper-irritability of the nervous system. The osseous systems of epileptics are thought to be deficient in calcium. Calcium has been used successfully in explosive conditions like tic and tetany. Then why not epilepsy?—Nashville Jour. of Med. and Surg.

SERPIGINOUS BROMIDE ULCERATION LASTING SEVERAL YEARS.—A married woman, aged 39, had suffered for 13

years from epilepsy, for which she took 3 grams of bromide every day. About a year after this treatment had been instituted an outbreak of pustules occurred, and while the old pustules became encrusted, others broke out beside them. Subsequently these pustules became confluent, and large ulcers developed, confining the patient to bed for several years. On admission to hospital she had to be isolated owing to the foetid odour from these ulcers. Yet the areas still showing active ulceration were small compared with the areas where large ulcers had healed. On the right upper arm there was a large, oval patch, somewhat raised, consisting of cyanosed, papillomatous tissue covered with crusts and small foci of pus, and bleeding readily when touched. In the center was an irregular pigmented scar. The thighs and legs showed extensive, pitted scars through which ran keloid strands and ridges, covered by numerous cyanosed, papillomatous, encrusted patches. This condition, which resembled extensive syphilitic ulceration, improved much under treatment with daily baths and compresses containing chlorinated lime, followed by the application of a 2 per cent. solution of resorcin.—The Medical Review.

TREATMENT OF TABES AND GENERAL PARESIS.—Holland declares that in spite of the progress realized in the treatment of syphilis in the last few years—or possibly because of it—the physician's task is no lighter than formerly, but more responsible and with new problems to solve. Treatment of syphilis in the primary and secondary stages must be continued until the Wasserman reaction has been negative for some time and the spinal fluid gives negative findings. The patients must be reexamined every year or so for ten years. In eighty-five cases of tabes or general paresis in his service and ninety-three cases of various other forms of cerebrospinal syphilis, since 1903, only one patient was known to have had systematic intermittent treatment through two years. In forty-nine others treatment had been exclusively symptomatic. The details of treatment were not known for the other patients. Courses of nucleinic acid, tuberculin and salvarsanized serum in tabes or general

paresis proved absolutely useless. The cerebrospinal fluid usually gave a negative response finally to the four usual tests, and the symptoms from meningeal involvement retrogressed, but no improvement was apparent in the clinical picture of the tabes or paresis. The only hope, he reiterates, is to start treatment in an early stage, but when the patient becomes alarmed about his condition and applies for treatment, it is then too late for it. It is possible that certain strains of the pale spirochete have a special affinity for the central nervous system. This view is sustained by the cases in which tabes or paresis develop in persons infected from the same source or in husbands and wives. He has had a few cases of this kind, but he thinks a constitutional predisposition is more likely. In one of his families, two brothers died at 43 and 48 of general paresis, and a third is insane. In another family, one man of 50 died of general paresis, his brother of 41 is being treated for cerebral syphilis which developed seven years after the infection, and a third brother has tabes.

NEUROLOGY

IN EXOPHTHALMIC GOITRE Abrahams recommends complete isolation and rest. He gives 5 to 10 minim doses tincture strophanthus three times a day to overcome the rapid heart action and moderate doses of bromides for the nervousness. One-fourth grain of codeine may be given when retiring if there is too frequent urination.

HEMIPLEGIAS DUE TO WAR WOUNDS.—The diagnosis of the situation of the lesion in cases of hemiplegia due to gunshot wounds is of some interest from the standpoint of surgical intervention. Guillain and Barre (*La presse medicale*, No. 16, 16th March, 1916) indicate certain criteria of diagnostic significance in this relation. Cases in which the pyramidal tracts are injured in the medulla, pons, or region of the crura cerebri manifest themselves in cranial nerve palsies, crossed paralysis, and sensory disturbances, the

latter often presenting a syringomyelic dissociation which can seldom fail to permit of a definite conclusion as to the situation of the lesion. When the hemiplegia is a consequence of injury to the motor tracts in their course between the cortex and the peduncle localization is often difficult, and it is with the focal diagnosis of such lesions that the authors collate their experience. Cortical lesions often affect a single limb, a segment of a limb, or even a particular group of muscles. Jacksonian epilepsy may be observed. A continuous localized epilepsy, a rare symptom occasionally met with, appears to depend on an irritative cortical lesion. Thus in one of the cases referred to movements of flexion and extension of the right toes were observed to continue for eight days. Disturbances of superficial and deep sensibility and astereognosis may be present. The tendon reflexes are exaggerated, but the exaggeration is less pronounced than in lesions of the internal capsule. The plantar reflex may be abolished in cortical lesions. In some cases it is, in the first instance, of the extensor but it soon changes to the flexor type, notwithstanding persistent exaggeration of the tendon reflexes and the presence of ankle clonus. Again, it may be irregular and inconstant. Lesions of the corona radiata cause total hemiplegia which is flaccid at first but may become spastic. The tendon reflexes are exaggerated, while ankle clonus and the signs of Babinski and Oppenheim are present. Lesions of the pyramidal fibres in the internal capsule, even when they are of small size, cause complete hemiplegias which tend to be spastic. The tendon reflexes are exaggerated and the plantar reflex is of the extensor type. Pyramidal lesions which also implicate the basal nuclei, and especially the thalamus, produce motor disturbances identical with capsular lesions, but in addition objective sensory disturbances with defective localization of sensory stimuli in the affected limbs, and it may be severe pain, hyperaesthesias and paracesthesias. Choreic and athetoid movements have been observed.—*Edinburg Med. Jour.*

INSANITY BY CONTAGION.—Dr. B. Henry Mason, Worcester, Mass., in *Boston Med. and Surg. Jour.*, Jan. 6, 1916, gives the history of epidemic obsessions, religious, social and political, and he states that more modern epidemics have been paranoid or hysterical. There must be some underlying mental disorder to be precipitated by epidemic emotionalism. The author asserts that mild manifestations are quite common.

DURING A "CAMPAIGN" by one of the blatant Me-und-Gott type of alleged "evangelists," we had seven cases of insanity precipitated by the disgusting emotionalism of the "tabernacle." Most of them were mild, and all in persons whose relatives should have had better sense than to permit them to attend the revival, which doubtless did good to many, but also hurt these unstable persons. Christianity is a splendid thing so long as it is kept splendid; but make it puerile and it injures those whose nervous systems are unstable.

CLINICAL PSYCHIATRY

INSANITY FROM DRUGS AS DEFENSE TO CRIME—EFFECT OF PRESCRIPTION.—The United States Circuit Court of Appeals, Fourth Circuit, in reversing a conviction of manslaughter, says that the chief rules of law applicable to the case were these: 1. Insanity, to be available as a defense, must reach the degree of failure to understand the difference between right and wrong. 2. Drunkenness is not an excuse for crime, but the long-continued use of alcohol or other drugs, even though voluntary, may produce delirium tremens, or other mental derangement violent enough to amount to insanity, and make its victim not responsible under the law. 3. Intoxication, or delirium, from a drug used with knowledge that it is likely to produce intoxication or delirium obviously stands on the same footing as intoxication from alcohol. 4. A patient is not presumed to know that a physician's prescription may produce a dangerous frenzy. But he is

bound to take notice of the warning appearing on a prescription, and this obligation, is of course, stronger if he reads the prescription. If, for example, in this case, the prescription itself, or the realized effect of the first dose of the chloral, or both together, warned the defendant before he had lost control of himself that he might be thrown into an uncontrollable frenzy, then he would be guilty of murder or manslaughter according to the view the jury might take of the circumstances. If, on the other hand, the defendant had good reason to infer from the terms of the prescription or the oral instructions of the physician, or from the effect of the first dose, or from all these together, that he would fall into unconsciousness from a larger dose, then he would not be legally responsible for acts committed in a violent frenzy which he had no reason to anticipate. If he was so frenzied by a portion of the medicine innocently taken under the direction of the physician that he was thrown into a mental state which placed him beyond his own control and beyond the realization of what might be the ill effect of an overdose, he would not be legally responsible. In this case it appeared that the defendant, on a voyage from New York to Charleston, killed another passenger. Before starting on the trip, he consulted a physician, who, fearing that he was on the verge of delirium tremens, prescribed phenacetin and caffen citrate for his headache, with the direction that if one powder failed to relieve, it was to be repeated in four hours, and, as a sedative for his nervousness, 2 ounces of chloral hydrate in solution, 1 teaspoonful containing 15 grains, to be taken every six hours, to be stopped after three doses. It is not correct to say, as a general proposition, that a man without expert knowledge is presumed to know the effect of chloral, or of other drugs, if he knows what it is, that is, what it is made of. In such an instruction, however, there was no harmful error in this case, because the defendant had express warning from the physician's prescription not to take more than a certain quantity. He knew it was a drug that would affect the nerves, and he was notified by the terms of the prescription that serious results would follow an overdose. Unless the dose, taken

in good faith under the physician's prescription, threw him into a state of uncontrollable delirium, he could not be allowed to take the risk of an overdose and visit the consequences on his fellow passengers. A distinction broadly made, as it was in this case, between insanity produced by disease coming as an act of God and that produced by a man's own voluntary act is not sound, for real mental disease amounting to insanity, as distinguished from ordinary intoxication, excuses, even when brought about by voluntary dissipation or other vice. Something of the lower court's views is to be found in the report in *The Journal*, Sept. 18, 1915, p. 1053.

PSYCHOLOGY

THE ALCOHOLIC AS SEEN IN COURT.—Victor V. Anderson has made a study of 100 cases of chronic alcoholics, those who are repeatedly arrested for drunkenness and seem more or less unmodified by any form of treatment. He gives statistics with reference to the number of arrests, the economic efficiency, the mentality, and the diagnosis in this series and finds that not more than one-half were capable of supporting themselves out in society. Fifty-six per cent. had the mental level of children below the age of twelve years. They were all suffering from conditions in general regarded as medical problems. For purposes of treatment they, in general, fall into two classes, namely, the steady drinker and the periodic drinker. The mentality of the former is either defective to begin with, or is so deteriorated from the insidious effects of alcohol as to require that he be confined or have prolonged care and hospital treatment. The periodic drinker, though in many instances he may require short periods of detention, as well as hospital treatment, is in general to be handled on probation and incorporation into society's scheme of living by means of well-directed medical, psychological and social service methods of treatment, methods that take full account of his peculiar mental make-up, his character defects, and temperamental difficulties.—*Boston Medical and Surgical Journal*.

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This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

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This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

Editorial and Business Offices, 3853 West Pine Boul.

OBITUARY

BY THE DEATH OF THE FOUNDER OF THE ALIENIST AND NEUROLOGIST one of the great pupils of the famed American School of Psychiatry of Rush, Stedman, Brigham, Galt and Ray has passed away. He had imbibed to the full the critical, judicial, radical, yet logically conservative, spirit of this school.

Dr. Charles H. Hughes was born at St. Louis May 23, 1839. He received his academic education at Grinnell (Ia.) College. He was graduated from the St. Louis Medical College in 1859 and in 1867 he was elected superintendent of the Fulton (Mo.) insane hospital which he conducted for many years with eminent success. He founded the Marion-Sims Medical College of St. Louis and long remained its professor of psychiatry and neurology. In 1880 he founded the ALIENIST AND NEUROLOGIST, which soon assumed and kept a prominent position among medical journals. From the beginning it was recognized as of authority by the British Journal of Mental Science, the French Annales Medicopsychologiques, the Berlin Allgemeine Zeitschrift fur Psychiatrie, the Viennese Jahrbucher fur Psychiatrie, the Italian Archives per la Malattie Nervose, Revista Sperimentale di Freniatria and Il Pisano, the Russian Journal for Psychiatry and Neurology as well as the Swedish Hygena and Ael Key's Nordiskt Mediciniskt Arkiv. Contributions to the ALIENIST AND NEUROLOGIST were therefore widely quoted in Europe, even in circles hostile to America.

The personal contributions of Dr. Hughes to psychiatry and neurology were varied, valuable and original. His discovery of the virile reflex was widely cited. In 1876 before Section X of the International Medical Congress, held at the celebration of the centenary of American Independence, he read what Dr. E. C. Spitzka in a review of the proceedings of the Congress a year later pronounced the most

valuable and important clinical contribution to psychiatry read before the Congress. This was on "Simulation of Insanity by the Insane." This was not only important from a forensic standpoint, but likewise from a differential diagnostic viewpoint. In it he did full and (at that time on this side the water) unusual justice to Ray and Workman. The translations of Italian contributions to psychiatry by the latter, which were undertaken at Dr. Hughes' suggestion, were of great value to American neurology. They led to a more widespread knowledge in English-speaking countries of the great Italian school. Lombroso was a great reader of the *ALIENIST AND NEUROLOGIST* and frequently cited from its columns American evidence in favor of his doctrines of criminology and degeneracy. Dr. Hughes was elected a member of the British Medicopsychological Association. He was early a member ex officio of the American Medico-Psychological. He was elected, in recognition of his work, member of many continental medical societies. He was a Fellow of the American Academy of Medicine, an Honorary Fellow of the Chicago Academy of Medicine and was a member of the American Military Surgeons Association and other American medical societies. He was a delegate member of many of the International Medical Congresses, including that of Budapest in 1909. Beside his valuable contribution to periodical psychiatric literature, he left a work on the Neurologic Practice of Medicine which attracted much attention. His death leaves a gap in American psychiatry not easily filled.

The forum he opened in the *ALIENIST AND NEUROLOGIST* for free and uncensored discussion of psychiatry and neurology was the greatest service that could be rendered American science. He died July 13th, 1916.

JAS. G. KIERNAN.

EDITORIAL

POWDER EXPLOSION ARTERIAL AND NERVE RESULTS are being reported at great length during the past two years. The old claims made in gas explosion suits that all such injuries were the results of fright or mental shock were on appeal not sustained by the higher courts. Thus in the Bandler case (Illinois Appellate Court Reports, 1902) the trial judge, on motion of the defendant gas company's attorney, directed the jury to find the defendant not guilty on the ground that the plaintiff's injuries were due to fright. He had been a healthy man before the injury. He developed a mitral lesion immediately after the injury. He became irritable and suspicious of every one. He thought his wife and daughter were trying to poison him. In consequence he became errabund. He showed many of the suspicious mental states common to cardiac valvular disease. Memory was defective as to recent events. The Appellate Court held (two of the judges were soldiers in the American Civil War) that:

"Granting that the plaintiff was not guilty of contributory negligence, the trial judge in directing a verdict for the defendant, must have assumed that the plaintiff received no physical injury, but that all of his disability following the explosion, and which date from that time, resulted purely and solely from fright. The evidence goes no further than this, that the plaintiff received no external physical injury. He was struck by the exploding gas only. The force of such an explosion depends upon the strength of the explosion and the proximity of the party to the point of the explosion. That one may be seriously injured or even killed by such an accident without apparent external injury, we know, if we are permitted to rely upon common observation and knowledge. That gunners are sometimes

disabled by the atmospheric concussion resulting from the discharge of heavy artillery, we must believe from personal observation and from the unvarying statements of writers upon the subject. One may be internally injured without external indications and that mind and body may be impaired by internal lesion or weakness as well as by external violence. The disability of the plaintiff followed the explosion so immediately that the inquiry at once arises. Did they not proceed from that cause?

"It seems to us to be far from true that all reasonable minds viewing this evidence would reach the conclusion that 'the heart murmur' was caused solely by fright. If they would not so agree then the act of the trial judge, in directing a verdict for the defendant, is wrong. But we are not left to supposition in this case. An expert, speaking of the condition of plaintiff, says: 'A sudden change has occurred for which there is no adequate cause given, other than the explosion, which might have been sufficient to produce the condition found. If the heart was perfectly healthy before the explosion and this murmur occurred afterward, I should be inclined to refer this murmur to the explosion.'

"This testimony tends to prove that the physical impairment of the plaintiff was the direct effect of the explosion. Its credibility and weight should have been submitted to the jury, whose duty it is to pass upon all questions of fact."

The trend of the European reports is to the effect that confusional mental states at times complicated by mental and nerve symptoms due to strain upon and break-down of the arteries result from explosions, even when no external injuries occur.

THE WAR AND CEREBRAL TRAUMATISMS.—The doctrine of concussion cerebral states urged by Duret (*Traumatismes Cerebraux*, 1880) and accepted by earlier and subsequent writers, has under the stress of surgical and medicolegal accident and insurance claims, fallen into the background. The trend has been to a coarse lesion or a depressed fracture

source or a psychogenic neurasthenia. Certain recent results by Maurice Velliers reassert the concussion doctrine. He studied 256 cases in military practice, excluding those instances where there were coarse lesions. He found many cases (*Bull. d l'Academie de Med.*, April 11, 1916) in which hemiplegia or other paralyzes, contractures, speech disorders, and even Babinski's sign passed off after a time, leaving the individual apparently normal and fit for any type of duty. Such subjects often retained some less evident defect which reduced their capability for service. Visual sequelae were met in forty-one cases, nearly always after occipital injury, and comprised temporary blindness in four instances, diplopia in three, contraction of one or both visual fields in sixteen, varying forms of hemianopsia in nine and pupillary inequality or both disturbances in nine. Unilateral astereognosis was noted in twenty-seven cases, especially after parietal, but sometimes also after frontal and occipital traumatism; at times it was combined with disturbances of superficial or deep sensation on the side opposite the lesion. Sometimes astereognosis disappeared gradually, finally being confined to parts of fingers or of the hand. Typical Jacksonian epilepsy was noted as a sequel in fifty-three cases, but in twenty-five others there were sensory equivalents of epilepsy such as tingling in the limbs, temporary deafness or tinnitus, scintillating scotoma or transitory blindness, psychic equivalents, attacks of vertigo (37 cases), and vertigo induced by changes of position, especially by bending the body forward (146 cases). These disturbances may follow injury at any part of the skull. Often they are overlooked, and may be followed, after an interval, by more severe manifestations, including typical epileptic seizures. Mental sequelae were noted in 127 cases, including such conditions, often intermittent or cyclic, as mental inertia, neurasthenia, pseudogeneral paralysis, euphoria, puerility, amnesia, etc. These mental sequelae do not (*N. Y. Med. Jour.*, June 5, 1916), follow frontal injuries, they especially occur in over half the cases after parietal injuries and also after occipital injuries. Of course, injury of the great association (the occipital) region would, as has been repeatedly pointed out,

produce paranoia. The multiplicity of mental results was pointed out by D. R. Brower (Alienist and Neurologist, 1883.)

SUICIDES IN HYSTERIA are, according to most alienists and neurologists, infrequent and when they result are usually the result of the unexpected success of a bluff. The therapeutic rule that hysteric attempts at suicide should be ignored and treated lightly is a safe and beneficial one. The question of diagnosis is, however, the serious problem. There is a rather too prevalent tendency to treat all emotional explosions without external cause as hysteria. This is found not only in laymen but among psychiatrically untrained physicians. The depressed emotional state of melancholia is but too often regarded as simple hysteria. All melancholiacs are potential suicides and suicide in melancholia is always an imminent possibility. Especially is this the case where the depression and the suicidal impulse is hidden under a factitious emotional exuberance. Sometimes the impulse takes one special direction only and will be carried out in no other way. Sometimes the impulse, modified by sex tendencies, takes a direction along the lines of least resistance. Thus womanly objections to mutilation lead women to commit suicide by poison where the suicide suggestion comes from a male suicide by throat cutting. Fashions of this type appear in the agonizing suicides by corrosive sublimate. A recent sensational Illinois murder trial (people vs. Orpet) is likely to set a fashion of potassium cyanide suicide. The ease with which it is procured being one factor. Thirty years ago a Chicago photographer committed suicide, leaving the following couplet: "Here's a receipt for a popular suicide. Take twenty grains of potassium cyanide."

MATERNAL HEREDITY.—In spite of the teachings of the biologists as to the influence of maternal heredity, prenatal, and post-natal environment on the offspring, the trend of later eugenists, especially those without biologic or embryogenic training, has been to lay stress on the paternal an-

cestry alone. The Kallykaks, the West Jersey American degenerates, rival family to the Jukes, so well discussed by Dugdale, tell rather a different story to that of the eugenists. There are two branches of the family, both having the same male ancestor. He impregnated the illegitimate daughter of a feeble-minded daughter of an inn-keeper. She had 480 descendants of whom 189 are known. Of these 146 were feeble-minded and 43 normal. The percentage of normals while not as high as that of the Jukes is still rather optimistic in its significance, since only the normal and feeble-minded were traced. The male ancestor of the Kallykaks married a healthy normal wife, all of whose descendants were normal and many of high grade. The influence of bad environment from illegitimacy makes the high figure of normals in the illegitimate branch, peculiarly favorable to the doctrine that the race is advancing. It is to be regretted that the insane epileptic, haemophilic, criminal and other defective scions of the illegitimate branch were not traced.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

MENTALLY DEFICIENT CHILDREN.—Their Treatment and Training.—By G. E. Shuttleworth, B. A., M. D., Fellow of King's College, London, etc., and W. A. Potts, M. A., M. D., Medical Officer to the Bermingham Committee for the Care of the Mentally Defectives, etc. Fourth Edition; price \$2.50. P. Blackiston's Son & Co., Publisher, Philadelphia.

An excellent book of 280 pages upon a too little known, and too little studied subject; embracing not only the technically medical side of the subject, but also, containing chapters upon the educational, moral and industrial training, and recreation of defectives, as well as upon the psychopathies of puberty and adolescence, which are no less important to the practitioner who undertakes the treatment of these unfortunates.

A list of public and private institutions in the United States, and an extensive, if not exhaustive, bibliography, are additions which aid in making this a thoroughly practical work.

D. S. B.

THE NEW CHIVALRY—HEALTH.—Being the proceedings of the Southern Sociological Congress, held at Houston, Texas, May 8th-11th, 1915.

A large number of instructive papers on varied subjects pertaining to sociology, public and personal, Hygiene and Criminology dealt with largely from an economic standpoint.

In their creed, we note the following very commendable features, viz: that it is their belief "that the physician should be paid for preventing disease, rather than curing it," and

"the Federal Government should establish a Co-ordinate Cabinet of Health."

We find the name of Dr. C. H. Hughes in the roster of active members.

D. S. B.

CHRISTIANITY AND SEX PROBLEMS.—By Hugh Northcote, M. A., Second Edition, revised and enlarged. F. A. Davis, Publishers, Philadelphia.

A study of sexuality, mainly in men, with the endeavor to "adjust the relations between science and Christian thought in the region of sexual ethics."

With this object, sexuality is discussed, *pro et con*, in its many and varied phases, with generous quotations and copious references to the voluminous literature, usually with the author's views and conclusions.

Among the more practical chapters, are those upon Sexuality in Childhood; The Battle of Chastity in the Adult; Mixing of the Sexes in Schools; Prostitution, and Divorce.

Due prominence is given to the regulation of prostitution, and "age of consent"; notwithstanding, our conviction that the "age of consent" should be materially increased, has not been shaken thereby.

While all will not agree with the author in all his conclusions, every one interested in co-ordinating sexuality with Christianity, will find this a valuable aid in formulating a basis of action.

D. S. B.

In **Diarrhea of Infants**

There are three important rules that should be rigidly observed—

Stop at once the giving of milk in any form.

Thoroughly clean out the intestinal tract.

Give nourishment composed of food elements capable of being absorbed with minimum digestive effort.

A diet that meets the condition is prepared as follows:

Mellin's Food - - - - 4 level tablespoonfuls

Water (boiled, then cooled) - 16 ounces

(Composition—maltose, dextrins, proteins and alkaline salts)

(Calories per fluidounce = 6.2)

Feed small amounts at frequent intervals

As soon as the stools lessen in number and improve in character, gradually build up the diet by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually given for the age of the infant. *Do not give any milk fat until the baby has completely recovered.*

MELLIN'S FOOD COMPANY
BOSTON, MASS.

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NOTES ON THE HISTORY OF PSYCHIATRY. XIV.*

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CHAPTER VI.

ON THE VARIOUS NAMES AND KINDS OF DELIRIUM.

HIPPOCRATES and his school especially pay attention to deliria of all the states of the soul, many examples of which meet us in their writings, since almost all invalids are subject to delirium, and we are forced to admit that their marks, courses and end are by them described with great skill and talent. Various names are found for designating the condition of the soul, many of which agree as far as their meaning goes, but others on account of much discrepancy ought not to be confused. So they are to be fully censured because all these conditions are rendered by "insanity" as has been done in translations. For delirium, the most frequently used term in the Hippocratic books is paraphrosyne and paraphronein for "to be delirious" like parakronein. Yet there is a more specific sense to these words too. In some passages paraphronesis, generally indicating delirium, seems to be contrasted with manie, i. e., chronic

*Continued from August, 1916 of Nasse's Thesis, "De Insania."

insanity. The following words have the widest significance: *ex heoauton genesthai* [to become outside of oneself] then *par' eoauton einai* [to be beside oneself] *ektos eoauton einai* [to be out of oneself]. Sometimes even *paraphrosyne* occurs in Hippocrates, as with the other physicians, for every morbid affection of the soul with fevers. But if they make a distinction between *paraphrosyne* and *phrenitis*, *paraphrosyne* signifies delirium, which, even if it occurs in a severe fever, nevertheless does not last long; in general, therefore, it is almost always a light mental malady [*desipientia*]. Words which are connected with *paraphrosyne*, *paraphronein*, *paraphron*, *paraphoros*, are found hundreds of times. Also they use the following: *parapronein*, *paralegein*, *parapaisai*, which indicate also a light delirium and a light mental stroke. To be delirious in a severe onset of fever seems to be more the meaning of the following: *parakoptein*, *parenechthenai*, *paraleresai*. The writer of the books on common diseases and of the *prorrheticorum* [on predicting diseases from symptoms] is wont to use *parakronein*, *parakronsis*, *parakronstikon* when he is talking about deliria. It has been said above that the word *mainesthai* indicates a raving delirium. *Ekmainein* signifies a very severe degree of delirium. Such is the insanity of the 13th invalid in III, Epid 3.

Above, we were talking about the word *ekstasis*, which is not the same as either *phrenitis* or *mania*. It appears to differ from these conditions in this respect, namely that it begins suddenly and that in it the mind is very much affected and alienated. As to the manner of presenting itself, this abnormality [*excessus*] of the soul can be of different sorts as is shown by epithets. So, e. g., *ekstasis* can be *sigosa* [silent]. It is very often said *oxeos existasthai* [to come on sharply]. Quite often *ekstasis* is called *melancholike* which signifies the origin of this abnormality [*excessus*]. Duretus says that in addition to the silent and raving *ekstasis*, a third is assigned in Hippocrates "in which the patients are thunderstruck and remain motionless, and they are

commonly called hoarse." Yet he has not proved this by citations.

A few words must be said about phrenitis which ought not to be overlooked inasmuch as it is mentioned together with mania. By the words phrenitis and paraphrenitis at a later time various ideas differing from their proper signification are implied [suppositae], so that it is worth while to examine what the force of phrenitis is, which is so frequently used in the Hippocratic books. From a comparison of them all it is evident that phrenitis is delirium, which differs from paraphrenitis in no respect except its continuance. Let us hear Galen who expresses this difference in the following words: "They do not call it phrenitis unless the patient has a fever and continues to be delirious [dieneke tes paraphysynes]." We shall recognize phrenitis by the continuance of the madness [dementia], and because it occurs at the same time as the fever. We see that those also are phrenetics who though existing in a comatose state yet retain consciousness [sapiunt], but they talk nonsense [delira] and although aroused seem to be in a stupor. Celsus of Tralles says: "And it is a characteristic of delirium [paraphrosyne] that fevers do not persist through all the attacks [tempora] but subside; but phrenitis always continues."

And so the violence of the deliria, as we find, is of no use for the determining of phrenitis. The fifteenth patient, III, Epid 3, is mentioned as phrenetic, who was harrassed with a continuous delirium for a long time. We call invalids of a certain class phrenetics who are delirious because affected by a mental torpor, although none of them is insane [oude exemane ton phrenetikon oudeis]. Hence it is related that a form of mild delirium [parakronsis] heralds phrenitis, because a mild delirium cannot be [a characteristic] of phrenitis. Dorrington disagrees with our point of view, and defines phrenitis as follows: "Every violent and raving delirium which is a symptom of fever," Hippocrates calls in a generic sense paraphrenesis, or paraphrenitis—paraphrenitis and phrenitis

differ in degree. For phrenitis is a delirium with a very high fever persisting with great violence and raving and also with continuous sleeplessness." It is evident from what we have just mentioned, against what we must warn [the reader]. Dorrington rightly rejects the opinion of recent [writers] according to which phrenitis is a fever from the inflammation of the dura and the pia mater of the brain. For this opinion admits of no defense either etymologically or pathologically.

CHAPTER VII.

ON THE DIFFERENCE AND CONNECTION OF DELIRIUM AND CHRONIC INSANITY.

The problem confronts us, and we must take pains in solving it: Has a distinction been found in the Hippocratic books between delirium and insanity? This problem is all the more important as it is often written in regard to Hippocrates that he did not discriminate at all between insanity and delirium; but I think that although it is difficult, it can be successfully answered.

Not infrequently passages are found in the Hippocratic books where the reader is in doubt whether he is talking about a chronic or an acute, i. e., a feverish form of mental alienation, e. g., in those [books] in which the condition of the soul is designated only by the word *mainesthai*. One remedy remains to us for bringing the matter to solution, i. e., to unravel one passage out of other similar ones. In this manner the matter is often expedited. Let us take for example Aphorism 235v from the *coact. prae-not.* the words of which are: Gnashing or grinding of teeth announce the coming of insanity [*manikon*] or death. Is it not quite doubtful what *manikon* means, whether it even means chronic insanity? Finally, after reading in the book on *prae-not* the same sentence with *en pyretoisin* [in fevers] added, we are sure that a raving delirium is designated by the word *manikon*. And this is not the hardest case: in many others the difficulty is no greater, nor yet is it less. Nevertheless, although there are many such passages, it is to be excused if any

one, as one of the more recent learned physicians has done, in a passage on the history of insanity, enumerates all the marks of delirium that Dorrington had collected.

It is not stated in so many words in the Hippocratic books what distinction there was to the ancients between delirium and insanity. In this as far as pertains to symptoms both diseases are different: yet it is more than clear from the descriptions of insanity and delirium, that febrile delirium is distinguished from insanity even from that time by its duration. So it appears from the description of phrenitis that it always ought to be accompanied by fever. At the beginning a light fever is present which afterwards on the fourth or fifth day becomes higher. In general, to tell the truth, paraphrosyne and phrenitis are only mentioned when the patient is feverish and the disease runs only a short time; but mania and melancholike [except melancholic ecstasis] are mentioned as occurring under the opposite conditions. The following is Galen's opinion on Hippocrates' distinction between the two diseases: fever is the only difference that exists between paraphrosyne and mania and by which mania and phrenitis are distinguished.

As for the causes of these affections the author of the book on diseases thinks that phrenitis is produced by the bile alone, and insanity [melancholia] by the phlegm and the bile. And yet we can not make much of this distinction because in the book on the holy disease and in the pamphlet on insanity, men are described being continually mentally deranged [desipientes] from bile alone and from phlegm alone.

If we examine the names which are used in the Hippocratic books for designating the forms of delirium and insanity, we find that authors have used many in signifying both affections. Let us refer the reader to the force of the words, mania, mainesthaiekmainnesthai, and those connected with them, which we have exhibited rather fully above; we recall what ekstasis melancholike signifies which seems to wipe out almost all differences [being placed half way between delirium and insanity]

as the Greeks, thinking it rose from black bile, did not include it as a febrile form of melancholia. I think I have clearly shown in Chapter III that a mental affection [alienation dianoia], is considered as a common condition; accordingly both kinds of insanity [phrenitis and melancholia], which can be supposed according to the view of our contemporaries to have been contrasted with the acute [febrile] and chronic kind of insanity], may have been called paranoia. And so as regards the essential character of each kind of insanity, they are considered equal and so nothing other than fever, and at the same time duration of time, appeared to distinguish delirium from insanity.

CHAPTER VIII.

SPECIAL TOPICS FROM PATHOLOGY.

I. Marks of insanity generically mentioned.

Any one can gather from the books of which we are treating, that no sure general diagnosis of insanity is offered, for from the systematic consideration of insanity comes only that of which we have found the teaching not yet perfected in the Hippocratic books: nor do we intend to deduce a general diagnosis of insanity from single passages in which insanity is mentioned, from brief remarks, from marks of insanity noted down and stories told. For that would not be the point of view of Hippocrates, but our own which we should attribute to him. We have purposed here merely to place side by side the symptoms of insanity found here and there and not referring to any special case, and so in some sense able to be called general symptoms. No other place seems more appropriate than the beginning of this chapter. The gravest indication of insanity as may be gathered from these passages seems to be considered a lapse of the mind.

1 and 2 errors come unseasonably, false perceptions of ears and eyes, which the tongue instantly expresses. 3, the sensation [sensus] of the whole body is often so perverted that the patients do not perceive pain. This

most important opinion is taken from one of the genuine books. Then the following points are mentioned that pertain only to the mental disease; [4] Ignorance of present matters; [5] Anxieties inappropriate to the occasion; [6] Desuetude and awkwardness; [7] Terrors and fears, night and day; [8] Love of solitude which they say coming alone is not considered a mark of insanity, but is only thought so when united with other marks of melancholia; [9] Laughter; [10] Non-recognition of familiar things; or when the patient devotes himself in a surprising degree to any subject with fixed attention [mente et contemplatione]; [11] Insomnia.

II. Description of the kinds of insanity.

I believe it is unnecessary to remind the reader that all the passages from the Hippocratic books which interest us in describing in this sense the kinds of insanity, are found only in the spurious books, although one can suspect that from the theoretical manner of describing them. Similarly, since there is such a relation [ratio] between mania and melancholia, you will clearly see that the Hippocratics in describing the kinds of insanity, will not distinguish between mania and melancholia; since from the explanation alone, you can gather what has been the cause of the name melancholia, that there should be a theoretical division of them in the same manner, resting on the supposed cause of insanity. Nor is it really otherwise, for although by the writers in the Hippocratic books, two descriptions of insanity and its diathesis have been handed down; nevertheless both are arranged according to their supposed cause, and from that it draws the distinct characteristic of each kind: for one derives insanity from bile or from phlegm, therefrom describing two kinds of insanity; the other deduces a double diatheses or origin from an improper balance [temperamentum] of fire and water in the body, both leave untouched the question as to whether they called these two kinds melancholia or mania. Yet we shall presently see how much he merits our praise and admiration

however hypothetical the division and pathogeny are in them.

A. Mental derangement [aphrosyne] arising from improper balance of fire and water.

I. Men in whom fire is more predominate than water.

[a] First degree. This kind of man still has good bodily health and sagacity [prudencia] and such a soul quickly perceives what is presented to it and does not often transform into other things. Although the nature of this soul is good, yet it can be made better.

[b] Second degree. But if the force of the water is still more overcome by fire, it is indeed a keener soul such as would be moved more quickly, and would rush to perception more quickly, but it is less stable than the former degree, because whatever is present goes apart and with a quick attack is borne into the lungs.

[c] Third degree. These are called mildly raving [hypomaiomenoi] men, but of actually more than in the second degree, the water is overcome by the fire; a soul of this kind is necessarily very keenly troubled by dreams. Such men are therefore called mildly raving [subfuriosi] because this is the nearest to insanity, since they are deranged [insaniant] by a slight and negligible inflammation, and they take pleasure in wine drinking and in eating meat and in good bodily appearance.

II. Men in whom fire is overcome by water.

[a] First degree. Those affected in this way are still sagacious [prudentes] but inferior to those in whom the mixture of fire and water is the best for the fire, making a slow motion and things glide more lazily into their minds. Such men are usually stable, and apply themselves to whatever matter they have undertaken. But if well taken care of they can become more sagacious and keen.

[b] Men of the second degree are called stolid [elithioi]. Since the desire to make a display [ambitus] is slow in them, perceptions come little by little and these that are keenly felt, are even perceptibly confused. They

do not so well perceive sharp sensations which occur in vision and hearing, such as things perceived by touch. They cannot perceive what should be perceived through vision and hearing unless they know them beforehand. For unless the soul has been moved by fire gliding in, they do not perceive anything whatever its nature may be. Therefore, it does not reach souls of this kind on account of its quickness.

[c] The third degree is where insanity [manie] is even slower, and those suffering from it are called dementes or attoniti [thunderstruck] [aphrones embrontetoi]. They weep, although neither annoyed nor struck by anyone, they fear things that should least be feared, they are affected with modesty, where it is least appropriate, and feel what does not become right minded persons [prudentes].

The writer of the description shows not only an accurate observation of the mental affections, but also a close consideration of the condition of mind which is usually known as insanity. Although no one any longer holds to the theory according to which insanity springs from an improper balance of fire and water, yet the phenomena which present themselves in the case of men with tendencies towards insanity are considered true of each. Our writer does not treat of real insanity but what is still greater, he explains a tendency to insanity, for those tending to raving, can rather be considered insane than those verging on insanity. The same holds true of the first two degrees of those who are called slow [tardi]. The author desires to show us in this passage a transition from temperaments and constitution to insanity; first he shows how mania, furor, arises from a choleric, sanguine temperament and irritable constitution. Men of the first degree are still reckoned sane; those of the second are the men we call wrathful and excitable and they tend towards insanity. Nearer to insanity come the subfuriosi [mildly raving] of the third degree, who rave with the slightest cause. These are clearly ill although they are not maniaci, as they say, for their

affection is called [to toiouton=the same] engista manies [nearest to mania]. Those who are called slow, are men of phlegmatic and melancholic temperament and torpid constitution whose condition of soul is folly [stultitia]. Those who have a middle place between the well and the sick are called stolid [elithioi]. But we are not prevented from saying that men of the third degree are plainly sick. For they are called dementes and attoniti [aphrones and embronteloi] by writer himself. On the one hand, they come nearer to the melancholics, but on the other, to the insane [amentes] and they come nearer to the former because they are troubled with false perceptions, and to the latter because their perceptions move slowly to them [allabuntur] which is wont to happen to the stolid. Such invalids who in insanity itself are melancholic and senseless [amentes] at the same time, begin to weep without any reason, which is noticeable likewise in old men whose soul, as they say, shows a childish form. Our contemporaries give the name imbecility [Schwachsinn] to such a condition of soul.

B. Insanity [manie] springing from bile and from phlegm.

Mention is made of these kinds of insanity in two passages and in almost the same words, first in the book on the Holy Disease [p. 309], then in the essay on insanity [p. 1288]. When these two descriptions of each kind as they actually exist, are taken together, two inferences are made which are quite inconsistent with each other. But both kinds are called continuous and so are chronic.

I. Insanity born of bile. Those who are mad from bile yell, strike, are evil doers, are never quiet, and never stop doing unseasonable things. Fear and terrors come to them when the bile has heated their brains after it has, by its attack, been driven to that place through the veins that restrain the blood. Fear surrounds them until the bile returns into the veins and the body, then it subsides. When the brain gets suddenly hot, they shout and yell, and after the blood has gone into the brain and boils in it, they have terrible dreams. This

happens not only to them when awake, but also when sleeping. Then in the same way the face becomes hot, the eyes red, and the mind plans some evil.

II. Insanity springing from phlegm. Those deranged from this cause, are not like the former, but are quiet and neither noisy or troublesome. They are sad at unseasonable times, they are worried and get hot [aestuant] until the brain becomes cold from bile and swells more than usual and from that affection they become forgetful. They have these attacks not like bilious attacks, since the brain does not become warm from bile.

Those who are mad from bile are true maniaci, i. e., furiosi [raving]. They suffer from mania, which is accompanied by a sad and gloomy derangement [error] of mind. The description of them is so true to nature that nothing further can be said of it. It seems necessary only to notice how ekstasis melancholike differs from an attack of raving which can happen even at night, which [ekstasis] arises equally suddenly from bile when the brain is filled with it, and does not last long. Those deranged by phlegm can not be called other than melancholics, since they have a sad and anxious soul; but because they become forgetful, as has been said, they appear to tend towards senselessness [amentia].

III. Some considerations of senselessness.

Many persons quite well acquainted with the teaching of Hippocrates, say no other kinds of insanity except mania and melancholia were known to him; they say that senselessness [amentia] was unknown to him. But first it seemed worth while to me to notice that words are found in the Hippocratic books that signify the condition of senselessness. We give here the same meaning to the word senselessness that Cicero does. He calls it an affection of the soul that wants a clear mind [i. e., the power of judgment having been broken]. The Greek word *anoia* corresponds to the meaning of this word, which is in Galen [*Hos tes dianoeitikes energeros paralysis*=as a paralysis of the intellectual force].

According to this writer, anoia is a defect of memory and reason springing from wetness. The same word often occurs in Hippocrates. Likewise asunetos, which is the same as amens [senseless]. Nor can it be gathered from the context what was the condition of the patients who are thus described. We have already spoken [chapter III] of aphrosyne, which, used for that affection of the soul which ensues from improper balance of fire and water, designates nothing other than lack of foresight [imprudential]. It may be said that the adjective aphron comes nearer than the substantive to the signification of amentia [senselessness]. Yet it does not correspond to our Blodsinnig. I think on the contrary that in other passages in which these words are not mentioned that insanity, called a kind of manie, is senselessness, to wit, that which as we have just said is caused by phlegm. For if there is any one in whom memory is lost, the same persons are wont to consider that senselessness is implicated. Nor does that passage describe senselessness as a condition arising by itself, but one dependent on melancholia; for those who are mad from phlegm, are, by reason of the brain growing cold and having been contracted, sad and worried, and because of the same affection become forgetful [hyp' autoutou patheos=from the same complaint]. For indeed can those insane persons be called senseless to the same extent, in whom water overcomes fire; for [hoi elithioi=the dull] are stolid and hoi aphrones kai embrontetoi [the senseless and thunder-struck] are imbecile. So it follows that words are found in the Hippocratic books by which senselessness is signified, but also that insanity itself which is nearest to senselessness, is named as only a part of mania.

But still it is uncertain whether this is the first place where it is indicated that senselessness was not known to antiquity, for perhaps the hoi aphyeis [the undeveloped] of the Pythagoreans, who are contrasted with those called euphyeis [the well developed] and have a physin blastiken, i. e., who are endowed with an unmanageable nature, with the result that they always

make mistakes, and so their minds are alienated, may be considered senseless.

IV. Certain special forms of insanity.

When special forms of insanity and accounts of disease, that are told in the Hippocratic books are almost all like what our writers refer to melancholia, we are thereby led to gather that at that time far more people suffered from melancholia than from mania. Except the raving of drunkenness, which is accurately described, we find no case in the Hippocratic books that can be referred to mania. Above all the phrontis is to be referred to melancholia, which is called nousos chalepe [a grievous disease]. The description of this disease is so noteworthy because regard is given in it for the bodily symptoms indicate a disease of the abdomen, a very frequent source of melancholia and hypochondria. For the intestines [viscera] are seen in it to be punctured as if with points of thorns; anxiety [ase] attacks the patient, who shuns light and human society, loves darkness, is seized with fear; the outside of the transverse septum swells, is painful to the touch, the patient is very frightened and in dreams sees terrible and fearful things and sometimes even sees the dead. This disease is wont to attack most persons in the Spring. Any one who has had the opportunity of observing many melancholics will find this description true to nature, and will have noticed that the patients are frequently complaining [queruli] because their intestines are pricked as with thorns.

A frequent affection, that tends towards fear, is just like that described [phrontis] and is explained in the book on matters pertaining to a virgin, and is considered as one of those which are continuous [acigeneis]. Men so affected are said to be so smitten with terrors that they lose their minds [desipio] either at night or by day, sometimes even both. They seem to themselves to see hostile demons.

This demonomaniacal melancholia, as it can rightly be called, is even the reason for many why they have been suffocated by a vision of this kind; but more frequently

women than men, because as has been noted, the nature of woman is more faint hearted [*athymotere kai oligotere physis he gynaike*] and smaller. Virgins just entering in puberty are principally troubled with this disease at the descent of the menses, though not much afflicted previously with this disease. Among married women it becomes more to the barren. The heart being then affected from the uterus and benumbed, insanity [*paranoia*] is born.

Then horror also and fevers, which they call planets of fever [*planetas tous pyretous*] can, as the author adds, ensue, the insane girl shouts, is frightened and fears; on account of the oppression, which is around the heart, there is suffocation but on account of the fault of the blood the soul tormented by anxiety and powerlessness, takes the evil. They call any one else in a terrible way, they bid themselves be thrown in wells and suffocated as if these were better things and surpassed every other advantage. From time to time, because of spectres not seen a certain desire seizes them to seek death as if it were a boon.

Now it seems not desirable to show by more examples how true these all are. For cases where such symptoms described by us arise in girls with suppressed menses and in barren women, can be regarded as not the most rare. This menstrual melancholia, I may say, can induce them to lay violent hands on themselves. Like this form of melancholia is that which springs from the menses in bilious women. The following is a brief description of this insanity. A depression [*demissio*] of the soul [*oligopsychie*] follow bilious menses; besides also bodily symptoms, in regard to which the author is silent in the immediately preceding description, are, freakishness of diet [*cibi fastidium*] insomnia, frequent belching. The sick women are tortured with anxiety, refuse to walk, show depressed spirits, and seem not to see what they fear. You will rightly say that there is some hysteria about this form of melancholia.

That kind of melancholia from which autocheiria [murder] is wont to come seems to be common with the Greeks; for besides those passages already mentioned, melancholia which satiety of life accompanies is mentioned in the Hippocratic books many times. Thus first those undone by sadness and in bad condition, who wish to commit suicide with a rope are affected, and for them the root of mandragora is recommended. Furthermore, the history of Parmeniseus, an invalid, is told, who became so desperate that he wished to have done with life from time to time to be sure he was of sound mind [therefore his insanity was intermittent]. Afterwards when he was at Olynthus, he was smitten with an acute disease which was followed by mental alienation [animi alienatis].

In the books on common disease twice, and once in the Epistles, we read of the Nicanor, a story which is surely worthy of mention. Nicanor's affection was of such nature that as often as he went to a banquet, he was affected by fear of the flute player, so that when the music of the flute was heard, when it was night he said he could no longer stay at the banquet. From time to time, however, when he heard the flute he did not suffer. This stayed with him a long time.

In the aforementioned book of Epidemics, another patient is mentioned in whom the insanity was more marked than in this one. In the last passage he is called Democles, in the first, Timocles. He seemed to himself to be excited by darkness and to have a relaxed body [lysisomatein, i. e., to have a dissolute and languid body], nor did he dare to travel over a precipitous place nor to cross over a bridge nor even a ditch, no matter how shallow, being afraid that he would fall; but he would go through the ditch, and that he had to was sometimes his good fortune. The narrator of this story [Hippocrates the 4th] suggests that this patient was not only troubled with vertigo, but suffered with a fixed idea because he says that this patient seemed to him to lysisomatein [to have a badly coordinated body]; for this Greek word is

unusual and occurs nowhere else. On account of the vertigo, even though it had been very severe, he would not have been able to cross over the shallowest ditch [jump over is not used—t' oulachiston bathos taphon=the least depth of a ditch]. Hence it follows that this disease has passed beyond vertigo and idiosyncrasy.

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(TO BE CONTINUED.)

A GENERAL DISCUSSION OF DEMENTIA PRAECOX.

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DEFINITION: From the very nature of dementia praecox it is a difficult matter to give a brief definition. Correctly speaking it is not a disease but is a general term applied to a group of psychoses making their first appearance during the period of adolescence or early puberty, characterized by occasional or frequent remissions, chronic and progressive in course, tending toward a stage of mental enfeeblement from which the patient usually does not recover.

Alienists do not agree as to the frequency of occurrence of dementia praecox as compared to other psychoses. I believe the reason for this lack of statistical concord can be found in the failure of some to correctly recognize and diagnose the condition. I consider dementia praecox to be a psychosis of very common occurrence. It is my opinion that upward of twenty-five per cent of all admissions to hospitals and institutions for the insane have dementia praecox. They constitute even a much larger per cent than this of the left overs from year to year, the chronic, non-recovered patients, who form the permanent population of all of our hospitals for the insane. It is a condition which ordinarily does not cause death but it usually destroys the producing power of the victim, rendering him unable to adjust himself to his environment and consequently a vast number of dementia praecox cases must be kept under restraint and supervision at public or private expense, many of them for several decades.

The name dementia praecox was first suggested by Pick, although Kahlbaum had previously described a puberty-psychosis which he designated as katatonia, characterized

by special muscular symptoms and rapid mental deterioration. Kraepelin formerly classified dementia praecox under the category of disorders of metabolism in common with myxedema, cretinism, and dementia paralytica. There are three types of dementia praecox commonly recognized. Namely, the hebephrenic, katatonic, and paranoiac. Kraepelin has suggested in addition to these well known types some subtypes. The types and subtypes as proposed by the eminent Munich alienist are as follows:

1. *Dementia Simplex*.—An insidious or almost imperceptible increasing apathy. Impoverishment of ideas and loss of interest. Onset usually about puberty or reaching back even into childhood. No delusions or hallucinations.

2. *Hebephrenia or Silly Dementia*.—Progressive, usually rapid, deterioration, marked from the first by peculiar behavior, hallucinations, paranoid trends or ideas of grandeur, scattering of thought, emotional variability. Depression often at the beginning. Particularly characteristic, the silly behavior, uncalled for laughter and infantile attitudes.

3. *Simple Depression or Stuporous Form*.—Cases which show prolonged depression, with or without stuporous symptoms, followed by gradual deterioration.

4. *Depressions with Delusion Formation*.—Depressive cases showing an emphatic delusional trend, often of the grotesque form and accompanied by abundant hallucinations.

5. *Excited Forms*.—Cases showing severe and long persisting excitement. According to clinical course the following subtypes are differentiated.

(a) *Circular Type*.—Usually begins with depression and prominent delusion trend, subsequently a marked excitement develops. The persistent senseless excitement is most characteristic of this type.

(b) *Agitated Type*.—Cases showing continuous restlessness and excitement, passing into deterioration, with or without remissions.

(c) *Periodic Type*.—An infrequent type showing an episodic course, excitements, followed by remissions. The intervals vary between the attacks but the final outcome is

deterioration. Some of these cases were formerly classed under manic-depressive insanity. The monotonous or repulsive activity and the limited range of thought, help to differentiate these cases from the manie excitements.

6. Katatonic Forms.—Cases which show both katatonic excitement and stupor. The alternation from one phase to the other is the chief characteristic of this group which is much more restricted than formerly.

7. Paranoid Form.—Types in which delusions and hallucinations are the most prominent symptoms but in addition there appear the characteristic features of dementia praecox. Two types are mentioned:

(a) Dementia Paranoides Gravis.—Cases beginning with simple delusion formation, but showing later plainly peculiar behavior and emotional deterioration. These cases occur especially in middle or later years of life.

(b) Dementia Paranoides Mitis or Hallucinatory Deterioration.—Cases developing like the first paranoid type but showing a peculiar terminal condition, with long persistence of hallucinations and delusions.

8. Forms with Marked Speech Confusion (Schizophrenia).—Shown particularly in the end stages with relatively less deterioration in other fields.

Bleuler of Zurich has long studied dementia praecox and the theories which he has advanced relative to the disease have been of the greatest importance. His conception of what constitutes dementia praecox is much broader than that of Kraepelin. It is his view that every functional psychosis belongs to the dementia praecox group. He defines dementia praecox, or schizophrenia, as a group of chronic psychoses with outbursts or remissions, each case showing a more or less clear splitting of the personality and disturbance of association—but without primary disturbances of perception, orientation or memory. As a sign of deterioration, we find hallucinations and delusions, confusion, dreamy mental states, manie and depressive emotional fluctuations and katatonic symptoms.

Bleuler divides the disease into four different forms:

1. Paranoia, with hallucinations or delusion formation in the foreground of the disease picture.

2. Katatonic.

3. Hebephrenic.

4. Simple Schizophrenia.

The manifestations of dementia praecox are frequently not recognized in the early stages, and diagnoses not made. In studying this, as in studying any other psychosis, it is not a safe procedure to take a cross section of the mentality and attempt to make a diagnosis. In the early stages of dementia praecox there frequently occur transitory episodes which clear up promptly. It is only by studying the life history of the patient that we can properly appreciate the importance of these episodes and realize that they are the early manifestations of a chronic process, the tendency of which is toward progressive deterioration. The early symptoms may be suggestive of the manic depressive psychoses, psychasthenia, neurasthenia, hysteria, hypochondria, confusion and paranoid states. A careful analysis will demonstrate the presence of emotional indifference and disorders of attention.

SYMPTOMS. The most common mental symptoms found in dementia praecox is what Stransky has termed intra-psychic ataxia. By this term is meant a disturbance of co-ordination between the intellectual attributes of the whole psyche and the affective attributes or, as he calls them, respectively—the noo-psyche and the thymo-psyche. It is because of this lack of co-ordination or intra-psychic ataxia, a separation of intellectual and emotional reaction that has led Bleuler to prefer the name Schizophrenia to dementia praecox. The simplest manner in which this co-ordination disturbance is manifested is by lack of harmony between the expression of the affect and the idea or content of thought. The patient cries when he should be glad or vice versa, or because of the poverty of emotion the patient merely simpers or smiles when the facts would warrant sadness or hearty laughter. He is stupid and apathetic, is usually orientated to time, place and person, may be conversant with every-

thing that is going on about him, memory is good, but is cold and passive, lacking in spontaneous reaction, usually shows failure of voluntary attention and lack of interest in the environment. He is not disposed to give expression to joy or sorrow excepting in a very shallow and superficial manner. Content of thought shows shallowness, indicating the intellectual enfeeblement. Patients complain that their thoughts leave them suddenly, when they try to explain themselves. This thought deprivation is the result of strong emotional content, the flow of thought being inhibited by the presence of the emotion. The physical condition of the patient also deteriorates, anorexia and insomnia are common, circulatory disturbances, rapid heart action, cyanosis of the extremities are often seen.

ETIOLOGY. Among the causes of dementia praecox, Kraepelin considers age, sex, conditions of life, heredity, germ-plasm disease and idiosyncrasy. Among the external causes, mental strain is first mentioned. Infections during development, syphilis, head injury, brain tumor and alcoholism occasionally are recognized as causes. Sex factors, Kraepelin has considered to be important. Menstrual disorders, the onset of the psychosis in pregnancy and the puerperium or after an abortion, serve to call attention to the sex factor in women. Masturbation is very frequently a symptom, especially of hebephrenia. Kraepelin believes the metabolic disorders which result in auto-intoxication to be important etiological factors.

He states that a large proportion of the cases of dementia praecox show well marked peculiarities of mental make up long before a definite psychosis sets in. The following are mentioned as the most frequent types of personality met with in dementia praecox cases.

1. Shut in, exclusive type, most frequent in male cases.
2. Sensitive, irritable, excitable, obstinate type, mostly women.
3. Lazy, unsteady, shiftless, mischievous type, mostly boys. These often become tramps or criminals.
4. Good natured, reliable, conscientious, diligent type, mostly boys who are especially marked by their strict

avoidance of all youthful naughtiness. Kraepelin believes that these manifestations are of the earliest and first signs of dementia praecox itself, instead of indicating a peculiar type of personality which predisposes to the development of the disease.

He has also suggested that masturbation, which is so frequently practised by the male hebephrenics, is a symptom rather than a cause.

Numerous other writers on the subject do not agree with Kraepelin's views, but are of the opinion that there is a peculiar type of personality which predisposes to dementia praecox. The type of personality as described by August Hoch as the "shut-in" personality, all writers agree, is the most common type which precedes the development of the disease.

PATHOLOGY. Two schools have arisen, each of which has presented somewhat different theories in an attempt to explain the pathology of dementia praecox. On the one hand the neuro-pathologists who have sought to trace the conditions to an anatomical basis; on the other hand the psychopathologists who interpret the disease as an inadequate, biological reaction, due to internal ideas or external experiences.

NEURO-PATHOLOGY. Alzheimer believes that changes occur in the first and second layers of the cortical cells. The involvement of the frontal region is correlated by Kraepelin with the clinical involvement of the higher intellectual functions as opposed to memory and acquired faculties not clinically involved. He believes that there is a topographical variation in the degree of the lesion with a tendency to a more marked involvement of the frontal, central and temporal regions, also strati-graphical differences in the permanent changes found in the cortex with a tendency to a greater involvement of the outer small cell layers. On the basis of these findings, Kraepelin suggests the major symptoms of dementia praecox may be explained, automatism, negativism, stercotypy, mannerisms, will disorders, neologisms, speech disorders.

E. E. Southard has examined the brains of fifty cases of dementia praecox and has published his findings in the

American Journal of Insanity, 1910, and in a series of articles in 1914 and 1915. He states that at least 90 per cent gave evidence of general or focal brain atrophy or aplasia when examined post-mortem, even without the use of the microscope and that the use of the microscope solved the problem of the remainder and that the only two normal looking brains in the 1914 series of 25, yielded abundant appearances of cell destruction and satellitosis in the cerebral cortex, which had not yet had time to be registered in the gross. The atrophies and aplasias when focal, showed a tendency to occur in the left cerebral hemisphere. It is worthy of note that the other organs of the body, the heart, liver, kidneys and spleen, tended to show a greater loss in weight than did the brain, in these cases of brain atrophy. At least nine of the cases had internal hydrocephalus. The major part of the internal hydrocephalic cases were katatonic. Southard stated one gets the general impression that gross alterations are almost constant and microscopic changes absolutely constant, that the high proportion of gross appearances suggesting aplasia means that structural changes of a mal-developmental nature lie at the bottom of the disease process. Another feature about the lesions in addition to the left-sidedness and the internal hydrocephalus, is the preference of the changes to occupy the association centers of Flechsig. He believes that these regions are affected because of their high lability and late evolutionary development.

The functional correlations, as worked out by Southard, are as follows:

1. Delusions are as a rule based on frontal disease.
2. Katatonic symptoms on parietal lobe disease.
3. A correlation between auditory hallucinosis and temporal lobe disease. Five of the delusional cases did not show frontal lobe disease. Correlating the neurological findings of Southard with the functional conclusions of Bleuler, a pathological basis for dissociations or schizophrenia seems to be provided by the lesions found. The main neuronic systems are often permanently preserved, leaving an irregularly and slightly simplified cortical apparatus,

which a few cell changes would naturally throw out of co-ordination a great deal of still intact apparatus.

Southard sums up his findings as follows:

1. The constancy of mild or general focal atrophies in cases lasting long enough to yield these.
2. The tendency to an exhibition of lesions somewhat more markedly in the left hemisphere.
3. The preference of the lesions for the association centers of Flechsig.
4. The right correlation of auditory hallucinosis and temporal lobe lesions as also
5. Of katatonia and parietal lesions, especially post central.
6. Of the more frequent form of delusions and frontal lobe disease.
7. The possible existence of a hyperphantasic parietal correlation.
8. A large internal hydro-cephalus group with katatonic and hallucinotic correlations or rather delusional.

Concerning the anatomy of dementia praecox, Adolph Meyer says in his paper on "The Nature and Conception of Dementia Praecox," the various lesions found are not clearly understood, when reduced to a definite and intelligent mechanism, except they are essentially degenerative. Again he disagrees with Alzheimer on the question that dementia praecox is an essentially organic disease and declares it possibly "an incidentally organic disease." The condition undoubtedly goes in some cases with a decided breakdown of the cerebral material marking an acute delirium or perhaps an acute stupor suggesting sub-mental factors. But the available anatomical facts in most cases are in favor of a break of compensation of metabolism rather than in favor of a distinct exogenous disorder. He believes that work like that of Crile on "Fatigue" may show that the nerve cell pictures are the result of functional changes.

After carefully studying the various theories and reports concerning the neuro-pathology of dementia praecox, we must conclude that there has not been found a satisfactory pathological anatomy of the disease. Nor will this

be found until we invariably find in this disease a uniform cortex picture such as can be easily demonstrated in the frankly organic mental disorders, such as dementia paralytica, senile dementia, sleeping sickness, amaurotic family idiocy, or the fever psychoses. Thus far this parallelism between structure and function has not been demonstrated in dementia praecox. A study of the psycho-pathology of dementia praecox is somewhat more gratifying than the study of the neuro-pathology. Although here, too, we find some irreconcilable differences of opinion.

Evenson believes that he found a close analogy between some of the most constant symptoms of dementia praecox, such as negativism, sterotypy, peculiar attitudes and the reactions of a normal person who has become preoccupied by one thought. He suggested that the essential features in both the preoccupied individual and the katatonic were due to narrowing of consciousness around the central content.

Bernstein explains the muscular tension in katatonia as due to a psychomotor disturbance and says it must be distinguished from the hypertonicity secondary to pyramidal tract disease.

Adolph Meyer has pointed out that the disease develops only in those individuals who show a long continued and unhealthy biological adjustment to meet their difficulties in an adequate manner, and he insists upon the abnormal make-up of those individuals who later develop dementia praecox. In elaborating his psycho-biological hypothesis, he points out that the disease is very unlike general paralysis and that the type of deterioration is essentially different. It is his theory that dementia praecox is due to a conflict of instincts, or rather a conflict of complexes of experiences and an incapacity for a harmless constructive adjustment.

August Hoch believes that dementia praecox develops only in those with the peculiar mental make-up which he terms the "shut-in" personality. The shunning mechanism may explain many of the negativistic phenomena of the disease.

Jung's writings on the subject of dementia praecox have been rather illuminating and he gives a logical explana-

tion of the behavior and utterances of this disease which were formerly interpreted as strange and at random. Jung has attempted by his manner or method of investigation to show why one case of mental dissociation should produce hysteria and another dementia praecox. It is his view that in hysteria the emotional activity has not ceased but is merely suppressed, while in dementia praecox there is a strong inhibition of the emotion, hence in the latter disease the striking emotional apathy. This emotional apathy is superficial, however, for in those dementia praecox patients who are successful to analysis it can be demonstrated that the emotions exist in a latent but active form in the unconscious. Jung makes the following statement concerning the emotions in dementia praecox, "That the affects in dementia praecox are probably not extinguished but only peculiarly transposed and blocked, we see this on rare occasions when we obtain a complete catamnestic view of the disease." Jung believes that the dementia praecox patient has many painful complexes and studies their associations to a series of test words taking the reaction time, thus forming what he calls complex indicators. A complex is frequently expressed symbolically, a symbolism which is best seen in dreams. Jung states that the psychological mechanism of dreams and hysteria are most closely related to those of dementia praecox. A comparison with dreams is therefore not too daring. In dreams we see how reality is spun with fanciful creations, how the pale memory pictures the waking state, assume tangible forms and how the impression and environment adapt themselves to the sense of the dream. The dreamer finds himself in a new and different world which he has projected out of himself. Let the dreamer walk about and act like one awakened and we have the clinical picture of dementia praecox.

Prof. E. Bleuler, of Zurich, has done more towards clearing up the psycho-pathology of dementia praecox than any other investigator of this most intricate problem. He has recently set forth his views fully in a section of Aschaffenberg Handbuch. This section he denominates the group of schizoprenias and has introduced into the literature of this

subject some definitions of new or older concepts, the term schizophrenia, ambivalence, ambitendency, autism. He discussed in part his psycho-pathology in an address at the opening of the Henry Phipps Psychiatric Institute in 1913, the subject of which address he called "Autistic Thinking." He has also discussed the subject in his monograph, "The Theory of Schizophrenic Negativism." He says the predisposing causes of negativistic phenomena are: First—Ambitendency which sets free with every tendency a counter tendency. Second—ambivalence, which gives to the same idea two contrary feeling tones, and invests the same thought simultaneously with both a positive and a negative character. Third, the schizophrenic splitting of the psyche which hinders the proper balancing of the opposing and co-operating psychism with the result that the most inappropriate impulse can be transferred into action just as well as the right impulse and that in addition to the right thought or sentiment, its negative can be thought.

Fourth, the lack of clearness and imperfect logic of the schizophrenic thoughts in general which makes the theoretical and practical adaptation to reality difficult or impossible. The autistic thinking or autism of the patient substitutes for reality a phantastic state. The schizophrenic patient keeps reality from injuring him by not allowing it to reach him. Autism for these patients has the same significance as the walls of the cloister to the monk, or the hermitage to the saint. Plain John Smith or Mary Jones become a Prince or Princess Royal, Emperor or Empress, King or Queen. The institution in which they live, their domain, the nurses and other patients their gentlemen and ladies in waiting and loyal subjects. Life proceeds for them royally. Mental functions fundamentally involved in schizophrenic patients are association, affectivity and will. Associations lose their coherence. The threads that lead out thoughts are interrupted in an irregular manner. These interruptions may be of few, many or majority. Stereotypic tendency so characteristic blocks the thought processes and they still hang to one idea, continuing to return to the same idea. There is disordered cohesion of simultaneous ideas and partial

ideas and also disorder in thought association. Ideas may be pathologically augmented in one field and blocked in another. The process is a true blocking rather than slowing or retardation. Disorder of emotions in schizophrenia is characterized by indifference. Unity of emotional expression is lost. The mind has not fundamentally lost its capacity to exhibit emotion, the patient being emotionally excited if painful complexes are stimulated. Ambivalence may be affective when ideas are accompanied at the same time by pleasant and unpleasant ideas. There is also an ambivalence of the will which may be termed ambitendency. Contradictory statements and acts may indicate intellectual ambivalence. As before mentioned, Bleuler has suggested the term schizophrenia as a substitute for dementia praecox. Schizophrenia, in the Bleuler sense, meaning a splitting of the psyche, an incoordination between the ideas, emotions and the will or acts of the schizophrenic.

PROGNOSIS. As before mentioned, the prognosis of dementia praecox is bad. This is especially true if we accept the older views relative to the character of patients that are to be grouped under dementia praecox. If we agree with Bleuler's view that every functional psychosis belongs to the dementia praecox group, the percentage of recoveries is certainly much greater. Kraepelin estimates that about fifteen per cent of dementia praecox cases recover. The prognosis of the katatonic is much better than that of the hebephrenic or paranoiac. The duration of illness of those that recover is variable, generally speaking, however it is relatively short.

Kirby reports the case of a woman 31 years of age, a patient in the Manhattan State Hospital who for $5\frac{1}{4}$ years showed a typical katatonic picture. The symptoms were mutism, general resistance to passive movements, muscular tension, fixed posture, hands clenched, head flexed, chin on chest, steady gazing and at times catalepsy. For several years she was regarded as a deteriorated katatonic. She began clearing up and gradually, progressively convalesced and was discharged as recovered, six and one-fourth years after admission. His report was made five years after her

discharge. During that period of time she had borne two healthy children and had remained absolutely well, showing no evidence of deterioration or derangement.

TREATMENT: The preventive treatment of dementia praecox is of the greatest importance. Atypical children, especially those of the "shut-in" type should be most carefully supervised. Their nutrition and physical development should be very intelligently watched and directed. They can be more safely developed along mechanical than intellectual lines. That degree of labor resulting in excessive fatigue or brain fag should be avoided. They are prone to excesses and should be carefully watched as to their habits, of masturbation, use of alcoholic liquors, tobacco, etc.

The care and treatment of the dementia praecox patient after the disease develops, presents many problems that should be carefully studied and intelligently solved. The katatonic may be stuporous and negativistic, refusing all food and drink. It then becomes necessary to feed the patient artificially. This should be done by the use of the stomach tube even though it be necessary to forcibly overcome the resistance of the patient. Some patients remain in this state for years, every drop of water and every particle of food must be given to them through a tube. In the acute stages they may be greatly depressed and disposed to suicide, and must be protected accordingly. Others show manic symptoms, attended by great restlessness and excitement. These conditions must be met by the use of the continuous bath, bed pack, and oft times by the use of sedatives. Constipation, if present, should be overcome. Some benefit may be derived by the administration of such internal antiseptics as red iodide of mercury and urotropine. The induction of a leucocytosis by the injection of a cubic centimeter of terebine subcutaneously, is of some benefit. If the patient be hard to control at home, he should be placed in an institution where his habits can be regulated and his treatment and nutrition more carefully supervised. If he develops anti-social tendencies, it is imperative that he be placed in an institution in order that society may be protected.

The indifference of the patient to his sensations not infrequently results in the accumulation of a large quantity of urine within the bladder and most severe retention. Most careful attention should be given to the functional state of all the excretory organs. The mouth should be kept cleansed regularly. Glandular extracts have been used liberally and frequently in dementia praecox. I believe in those cases of katatonic stupor with low blood pressure and cold extremities, thyroid extract is of benefit. I believe, too, that we get some results from the use of Didymium Tablets as prepared by Burroughs and Wellcome. Surgery has not infrequently been resorted to in the treatment of these patients and many ovaries and some testicles have been very unwisely removed. I only mention any surgical procedure in the treatment of dementia praecox, that is not indicated because of local pathological conditions, to unqualifiedly condemn it. The patient is not benefited by such treatment. There is one operation, however, which I desire to commend. I refer to the lumbar puncture. It has been my experience that the majority, if not all, of the praecox patients manifesting symptoms of katatonic stupor have an excessive amount of cerebro-spinal fluid, a condition which can very properly be designated as an hydrocephalus. The pressure of this fluid upon the brain interferes to a greater or less degree with cerebral circulation, prevents an adequate amount of blood entering the cerebral vessels and hinders nutrition of the cortical cells. By withdrawing the excess fluid at intervals of several days or a week, I have seen the symptoms of stupor and negativism promptly and most decisively disappear and complete recovery quickly follow. This treatment, of course, is most beneficial in the acute stages of the disease. Psychoanalysis, if properly used, is helpful in some cases. Re-education and training of the chronic praecox patient is a most important aid in the restoration of the patient.

CONCLUSION. If we accept the Bleuler conception of dementia praecox, it is not the hopeless and incurable disease which it is so generally understood to be. The most important phase of the treatment is the prophylactic and the

prevention of the disease in those predisposed. Such patients require very careful attention on the part of the nurse and the physician, and the treatment should be prompt and active in the early stages. It is my opinion that the most important and effective therapeutic agent that we can use in the treatment of katatonics is the lumbar puncture and withdrawal at regular intervals of the excess amount of cerebrospinal fluid which is usually present in these cases.

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HYPOTHETICAL QUESTIONS

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The Illinois Appellate Court reversed on finding of fact a judgment against the city of Chicago and rendered the following opinion. This opinion was as to the answer to the second question being erroneous held in other cases erroneous by the Illinois Supreme Court which has varied greatly and contradicted itself as to the proper answer by the expert as to cause and effect. The present holding is in favor of the answer herein given.

HYPOTHETICAL QUESTION

The following question was asked by Mr. Maher: Doctor, assume that this lady, then thirty-six years of age, who had been in previous good health, had slept well, ate well, and had no medical attendance, except such attendance as was occasioned by her confinement; assume that such a lady

was walking along a sidewalk, carrying meat in her right arm in that manner (illustrating), and that as she stepped along she placed her foot upon a board, which seemed to give way beneath her, and she fell, catching the heel of her shoe between the board and a nail, and twisting and falling, lacerating her finger, bruising her arm, and being stunned at the time; that she then arose, and assisted by a friend, went home and suffered with severe pain in the knee and hip and in the back and lower part of the stomach; that she was sick at the stomach; that a few days thereafter she consulted you and you found the condition which you have described, and that the physician found that she was suffering with pain in the knee, hip and back; and showed an injury to the hand, and that the hip was found swollen; that the right leg was found to be elongated three-quarters of an inch; that the physician measured that leg carefully; that the joint of the right hip was swollen; that the physician, on trying to flex the leg, could not do it on account of the resistance of the patient, that two days thereafter he found the hip and leg in the same condition, except that there was a little more swelling at the joint; that he concluded then that a plaster cast was necessary to immobilize the hip and thigh and to keep her quiet, so that there be no involuntary twitching of the muscles and nerves about the hip; what would you say that condition or trouble was due to or occasioned by?

Mr. Ayers: I object to that question.

Mr. Maher: Would you say it was due to extraneous violence, spontaneous disease, or what other cause?

Mr. Ayers: And I object to the question with the amendment.

The Court: I think the City would be very glad to have that answer in with an exception reserved to the City upon it. But if you are willing to take the risk of it you may have it. This question was improper.

In the case of the National Gas Light and Fuel Co. vs. Miehka, 35 Ill. App. 632, the principal issue or fact in the case was the cause of a certain explosion. The testimony of a professor of chemistry was taken from which

it appeared that the witness had made an examination of the premises and machinery of the gas works and particularly of the scrubber immediately after the explosion. After describing the plan of the scrubber and some of the conditions which he discovered, the Court against the objection and exception of appellant allowed the following question and answer.

Q. What opinion or conclusion, if any, did you arrive at from that examination, as to the cause of the explosion?

A. My opinion is that the explosion was caused by gas from the gas holder passing through the pipe on the right hand of the scrubber and going into the scrubber and mixing with the air already in the scrubber, and being ignited by some flames applied at the lower part of the scrubber on the left hand side, probably by the door that I had mentioned.

Regarding the competency of this testimony the Appellate Court says: "The admission of this testimony was in violation of the principle well settled and abundantly illustrated by adjudged cases which governs the introduction of expert or opinion evidence. A witness is never permitted to take the place of the jury and render a verdict for them, by stating the inference or conclusion from a settled fact, which is the province of the jury to draw for themselves.* * * The opinion given was not upon matter within the proper domain of expert evidence."*

In the case of *L. N. A. & C. Ry. Co., vs. Shires*, 108 Ill., 630, the Court says: "We are not aware that it has ever been held that a medical expert has the right to an opinion formed upon the information derived from private conversations with the witness in the case and we are not inclined to adopt a rule of that character. He may examine the patient and from such examination give his opinion. If the medical expert has not made a personal examination of the patient then the proper practice is to put a question to the witness reciting those facts hypothetically, upon which the opinion of the expert is wanted." 1 *Greenleaf on Evidence*, 444. *Pyle vs. Pyle*, 158 Ill., 300.

In the case of *C. & A. R. R. Co., vs. Glenney*, 175 Ill., 242, the Court says: "The opinions of witnesses as to value

may be based upon a hypothetical statement of what has been already proven in the case—as to the quality, conditions and situation of the property—as well as upon their own actual observation. (*Moore vs. C. M. & St. P. Ry. Co.*, 78 Wis., 120.) Instead of asking the witness his opinion based upon the testimony already in, the question should have been framed hypothetically, so as to embrace such facts as the evidence was supposed to show. Questions put to an expert on direct examination must be framed hypothetically, unless there is no conflict of evidence as to the facts or the witness is personally acquainted with them.” (*Bradner on Evidence*, P. 537.) “It has been permitted in, as we said, in *Pyle vs. Pyle*, 158 Ill., 289, (on p. 300); the better and proper practice, however, is to put a question to the witness reciting the supposed facts hypothetically upon which the opinion of the expert is wanted. The error in this case was one of form rather than of substance.”

In the case of *C. & E. I. R. R. Co., vs. Wallace*, 202 Ill., 129, is the leading case on the subject of hypothetical questions. In that case the Court said: “It is a well-settled rule in this state that a general objection to a question asked of a witness is not sufficient where the defect is one that could be obviated in case a specific objection were made. In *Stone vs. Great Western Oil Co.*, 41 Ill., 85, we said: ‘It has been so often held by this Court that objection to evidence must be specific, that it has become the doctrine of this Court. The rule is, that the party making the objections must point out specifically those insisted on, and thereby put the adverse party on his guard and afford him an opportunity to obviate them.’ (See, also, *Buntain vs. Bailey*, 27 Ill., 409; *Gillespie vs. Smith*, 29 id., 473; *Wilson vs. King*, 83 id., 232; *C. & E. I. R. R. Co. vs. Holland*, 122 id., 461; *Benfield vs. Albert*, 132 id., 665; *Schott vs. Yiuree*, 142 id., 233.) The rule that objection to a question should be specific, and not general, as are here under consideration (*Rogers on Expert Testimony*, 2d Ed., Sec. 27; *Barber’s Appeal*, 63 Conn., 393.)

“The question is ably discussed in the case of *Goodwin vs. State*, 96 Ind., 574, where it is said: ‘If the Court

were required to determine whether the hypothetical question correctly stated all the facts, it would be compelled to usurp the functions of the jury. If the Court were required to determine whether all the facts were stated, it would be compelled to determine the credibility of witnesses. If the hypothetical question were required to embrace all the facts, then there would be an end to all certainty in trials for confusion, and endless wrangling must inevitably flow from such a rule.'

"The rule is thus stated in 8 Encyclopedia of Pleading and Practice (pp. 755, 757): 'Hypothetical questions to an expert witness may be framed either upon all the facts in the case, or upon any part of the facts assumed to be true, which is sufficient in itself.* * * A hypothetical question may be based upon any assumption of facts which the testimony tends to prove, according to the theory of the examining counsel.' "

In the same case Appellee asked Dr. Kiernan the following question, which is the correct form:

Q. Doctor, assume a lady about thirty-six years of age, of previous good health, having been confined in childbirth six times, who had no trouble after her confinement, had never been sick except with a little cold once in a while, and who, on the 13th day of September, 1900, stepped upon a board in the sidewalk, which board gave away with her and she fell; assume that as she went down the heel of the shoe of the right foot caught upon a nail, and that she was thrown, and as she was thrown it ripped the shoe, the upper part; that in falling she twisted and fell to the side of the sidewalk, and then rolled to the ground; that she was somewhat dazed; that she was then assisted to her feet by another lady and was assisted home by means of leaning on the other lady's arm, which was around her waist; that she went home, some four or five blocks; that she experienced pain about the hip joint, and in the interior part of her abdomen, the lower part, and pain in her knee; that she was sick at her stomach and vomited; that she had pain in the back of her head and pain in her back; that she had pains all that night and slept very little; that next day

she still continued to have those pains, and that a doctor was called toward evening of the next day and on examination found that the parts about the hip joint were somewhat swollen; that there was tenderness there; that he was unable to flex the leg upon her body by reason of her resistance, owing to the pain; that on measurement the right leg was three-quarters of an inch longer than the left leg; that the knee was very tender and painful; that he applied liniment and hot cloths and a day or two afterwards applied a plaster of Paris cast for the purpose of keeping the parts quiet; that she lay in bed and on the couch for five or six weeks; that she suffered pain during all of that time; that afterwards the cast was taken off and she got about on crutches; that she had that pain continuously and got around on crutches for several months, and then she used a cane and an umbrella in getting around; that ever since then she has walked with a limp; that she has a cold sensation in the right leg; that she has continuous headaches and her sleep is interrupted by dreams, but that she seldom gets a good night's sleep; that there was wasting of the muscles to some extent after the accident; that there was an absence of the reflexes on the right side and an exaggeration of the reflexes on the left side, that that condition was a year and a half or two years after the accident; that later the reflexes on the left side diminished so that three years after the accident they were very much diminished, the reflexes on the right side remained absent; that about three years later she had another spell in which she suffered pain in her hip and knee and leg, and she went to bed and was treated for that condition for about one month, during which time she remained in bed; that she is now anaemic; that after the accident there was a loss of weight, but there seems to have been some improvement in her health; that at the present time the contracted condition of the muscles has disappeared; that the lengthening of three-quarters of an inch also seems to have disappeared; that there is still impairment in the gait, and she is very nervous; that before the accident she did house-work and she did sewing and dressmaking; that since the accident she has done light housework,

but has done no heavy work and has not done sewing; assuming these conditions and these facts to be true, have you an opinion as to the cause of the condition described in the hypothetical case?

A. I have an opinion.

Q. What is your opinion as to the cause?

A. From the hypothetical case I should be of the opinion that the cause of the condition was the fall and its results.

Q. What, in your opinion, is the condition described?

A. From the hypothetical case I should be of the opinion that the condition described is one of rather deep nervous exhaustion.

Q. Have you an opinion as to the permanency or otherwise as to the condition?

A. Well, I can only say it would be rather protracted.

HEREDITY—A STUDY OF AN AMERICAN GENEALOGY.

BY CHESTER HENRY KEOGH, B. A., M. D.,

Chicago, Ill.

THE consideration of the subject of insanity, in recent years, has been wide spread. Much has been written upon the subject. Far more has been said and gone unrecorded. Is it not now timely to think upon the matter a bit?

Heredity has been the one cry in the matter of etiology, which is, translated into the vernacular of a layman, the cause of the trouble.

If a boy born in 1900, during this year, 1916, becomes a victim of insanity, society has set the fashion to hold responsible the parents, one or both, for the boy's misfortune. "But," the parents reply, "we are both quite sound mentally."

"Perhaps, then," replies society, "it was the grandparents who handed down the malady, for insanity is said to skip generations sometimes."

The parents were born in 1875. The family records are searched. The boy has four grandparents. All are sound mentally, it appears.

The grandparents were born in 1850. They deny the charge that they, one or all, are responsible for handing down the taint. They look up family bibles and find the boy's great-grandparents were born about 1825. There were eight of them whose history is sound.

The town records of New England are rather complete. The family is well connected, so correct information is to be had concerning the great-great-grandparents who were born about 1800. They were sound mentally, it is found after some search, for the boy had sixteen great-great-grandparents.

The same is found true of the great, great, great grandparents, of whom there were thirty-two, born in 1775, or thereabouts.

He had sixty-four great, great, great, great, grandparents who were born about 1750, and he had one hundred and twenty-eight great, great, great, great, great grandparents born about 1725, all sound mentally, apparently. His family history is searched further and it is found he had two hundred and fifty-six great, great, great, great, great, great, great, grandparents born about 1700. All are reported mentally sound, and one was, perhaps, the Governor of the colony at that time, and it is this gentleman whose surname the family of the boy bears, and whose coat of arms the boy's mother has upon her stationery.

The great, great, great, great, great, great, great, grandparents were born about 1675, and there were five hundred and twelve of them. The generation of great, great, great, great, great, great, great, grandparents, were born about 1650, in New England where family records of that day are easily traced, and there were ten hundred and twenty-four of them. They are found to have been plain living, high thinking, or hard working gentlemen, ladies, doctors, preachers, carpenters, sailors, inn keepers, farmers, blacksmiths, shoemakers, tailors, fishermen, lawyers, poets, soldiers, etc., and their matrimonial copartners. They were all sane. Now in this list of the forebears of the afflicted boy, if heredity be the cause of his insanity, which one, or which group is to be blamed, at whose door is the cause of his insanity to be laid? We have searched ten generations back to the times which any member of the Society of Colonial Dames will admit is recorded rather fully in the genealogical records of New England.

We have looked over the family records of two thousand and forty-six of the members of this boy's family born in 1650 and later, and found all of them sound. Where is the heredity in the cause of this young man's condition?

Suppose now, one of these two thousand and more ancestors of the boy who was born in 1650 had been mentally unsound. Suppose an ancestor of the boy of the

generation following, suffered from the full effect of his tainted blood, he had one-half of the insane man's blood, and the next a quarter, and the next an eighth, and the next a sixteenth, and the next a thirty-second, and so on down to the boy, who possesses, say a one thousandth dilution of the tainted blood of the insane progenitor, is it not fallacious to say the boy's insanity is to be laid to this ancestor? Does nature, which provides the remedy for so many other forms of malady, provide none for the insane ancestor to insure the offspring against contamination ten generations removed?

I hold it to be as fallacious to assume that the race is unable to purify itself as it would be to conclude that the Chicago river flowing into Lake Michigan, contaminated the waters of the mid-lake, which by the action of the waves and the air and the sunlight oxidizes all impurities completely. Near the shore the clarity may be affected by the stream, but no further. If the human race were not able to provide a remedy for any hereditary defect, in time, it could not have survived.

If, on the other hand, we consider other factors than heredity, simply, perhaps we will be nearer the truth when we attempt to lay down the causes for insanity. Of these, environment is not the least. The character and force of the mental shock is also to be considered. The psychological moment at which the impact of the shock is felt is to be thought of. The state of mind and body at the time of the shock, and last and not least, the hereditary predisposition of the individual attacked toward instability which is noted in most races or families where the influence of culture and civilization, of poverty or poor nutrition, has left an impress upon the mental, motor, sensory and sympathetic nervous mechanism of individual members.

In attempting to administer to the individuals affected mentally, we will consider the boy for illustration.

His mental predisposition toward mental instability, we cannot alter, but that is the only constant factor in the equation of the etiology of insanity. When its existence is known, and it is easily recognized by students of the

subject, then preventive medicine must make its influence felt. The boy's environment must be most carefully regulated to meet this condition. The state of mind and body must be watched over. The occasion of mental shocks of all sorts must be avoided and the period of developmental sexual change must be most diligently scrutinized and understood by the physician in control of the family's destiny. For the family physician who advised and guided the boy's parents through his childhood, does not discharge his duty if he fails to watch over with even greater care the changing youth. It is easier far to keep one out of an institution for the disorders of the mind than it is to affect a cure after one has been admitted as a patient, and a recent move toward state medical supervision of school children, is in the right direction.

The appalling list of young men and women who fill our hospitals for the insane today, may under such prophylactic measures be numerically lessened in the future, if we cease to blame the ancestors for acute attacks of insanity, which, like the infectious diseases of childhood, in spite of the best of precautionary measures, sometimes overwhelm their older children. We must set about saner rules of work, play, diet and sleep, and give more thought to the growing boy and girl in their whole environment.

Consider the parent who parades off to a "movie performance", night after night, with the whole baby flock of the family. Consider the poor ventilation of the place, the character of the sensational features commonly presented. Consider how the child comes home weak-eyed from the trying light of the gloomy auditorium. Consider the excitement which occupies the little fellow's brain, for hours he lies sleepless for fear he too, like the boy in the movie picture, should be kidnapped by Italian organ grinders.

Consider our girlish portion of society and the excitement of which she is allowed to become a needless victim. Consider she is someday to be the mother of a family, and consider her brother is to be ancestor to future generations, and then let us think the matter over and so advise the regulation of their young lives, their conduct,

education, and their habits, that to an eagerly investigating search of the future for the cause of insanity in a descendant of the present generation, the findings may prove to be as clear as those of the sixteen-year-old boy considered in the first portion of this paper. Ten generations of his antecedents were sane. He is insane. Where lies the cause of it? Truly not in heredity alone, but in a multiplicity of factors. From the data it is assumed that there was no interbreeding of blood relations; but to prove this point, is almost outside of the possibilities, when the population was small and the number of forebears so large a factor in the computations.

In small secluded districts often the intermarriage of blood relations was of common occurrence. As a general rule this custom tended toward constitutional weakness rather than to health and vigor of body and mind, but the condition simply exaggerated the predisposition toward insanity. Such interbreeding is not in itself an exciting factor in the precipitation of mental breakdown.

There is still another point of view in the scrutiny of heredity as the cause of insanity. Suppose instead of starting with the boy, who was born in 1900, we begin with one of this boy's one thousand and twenty-four ancestors in the direct line—all of whom were in the same degree related to him—and all of whom belong to the generation who were born about 1650.

Now as it was the fashion at that time to have large families; let us say that A who married B was the father of ten children, born after 1675; let us say each of the ten had ten children of their own who were born after 1700. A, then had one hundred grandchildren. The family were prolific breeders and these grandchildren kept up the record of their sires and each had ten children born after 1725, which makes ten thousand great grandchildren for A. But the country was then new. There was place for all without crowding, and these great grandchildren had each a family of ten, born after 1750. A, if he were then alive, could have counted up one hundred thousand great, great grandchildren of his own blood. But in 1775 and thereafter, conditions changed, and let us say the families were smaller.

Each of these one hundred thousand had each but five children born after 1775. A, at this time then could have counted, had he lived, a half million of his great, great, great grandchildren. The generation born in 1800 and after, let us say, at the same rate of increase numbered two million and a half, and in like manner the generation born after 1825 tallied up five million, and A's descendants born in 1850 and after, equaled, let us say, twenty-five million.

If we consider the rate of increase in the same manner we should conclude that one hundred and twenty-five million of the people alive in the United States, today, were descendants of A, who was born in New England in 1650.

Now, further, let us suppose the father of A, as shown by English records, was quite insane when he emigrated to Holland, and quite insane when he came over to America in the Mayflower—this being shown by the family records still obtainable in his native country, England.

If heredity be the cause of insanity, and if the race be not able, and does not in fact, purify itself down the ages, all the descendants of the father of A, one hundred and twenty-five million living today, might be expected to be found insane. Which is *reductio ad absurdum*.

But this conclusion is no more absurd than is any other aiming to show a numerically large group of insane descendants all related in like degree to the father of A, who was insane in 1600 and thereafter. Were this not a fact the whole nation would be tainted with insanity. The atavistic tendency to return to healthy type has been, in recent years, forgotten.*

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*Heredity: James G. Kiernan, *Medical News*, Feby. 10, 1902.

THE PATHOGENESIS OF SOME NON-PSYCHOGENETIC TYPES OF FUNCTIONAL NERVOUS DISORDER.*

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THAT functional does not mean unknown is an idea slow to penetrate the mind of practitioners. A neurologist of wide vision, if imbued with the scientific spirit, not content with a mere name, seeks a cause of functional disturbance; he wants to understand its mechanism so that he need not by fumbling rule-of-thumb, stab at the stopcocks, hoping for favorable happenings, and rarely sure of the outcome.

It will be profitable to discuss together some of these functional mechanisms. As the concrete situation is easier to grasp than the abstract generalization, it will be by cases that the presentation will be made.

SO CALLED NEURASTHENIA

The head of a prosperous engineering firm was sent to me from California by Dr. Pressley, because of exceedingly unpleasant and incommoding feelings, chiefly within the head, which his neurologist there obstinately attributed to neurasthenia. The patient is tired of two years consistent and conscientious blunderbus-therapy, which included even cessation of work in a mountain camp for four months without the least benefit; and after high words with his friend, the neurologist, came East to seek another opinion as he was convinced,

* No consideration will be given here to functional disturbances of psychogenetic character, not because they are unimportant; for they are exceedingly important, and very numerous; but because their mechanism has been so often presented during the last few years, particularly by the present writer. Nor will the incipient stages of paresis, dementia precox or other major psychoses be considered. Nor shall we deal with the mild cyclotimias or deteriorate conditions of hereditary type.

after studying many text-books, that he was not in the least a neurasthenic within the usual meaning of the term.

His illness began suddenly by a sensation of being drugged, surging through him. This lasted ten days. He was not sleepy, more tired; he felt all dreamy and made mistakes at work, at addition for instance. Special stress upset him; but he did not feel run down; but he is not torpid, is rather restless, working mentally or physically makes him no worse, but he has no inclination for exertion, mental or physical, both of which he formerly enjoyed. Even to bathe or to go to the theatre is felt to be too much of a task. Sometimes the cloud leaves him for a few days, he is then perfectly alert. At his worst there is a congested feeling at the back of the head, and it can always be brought on by coffee or digitalis, each of which makes him very restless and somewhat confused. Alcohol has no effect upon him. He feels worse after lunch before which he has a drawing feeling like, but not, hunger. He has cephalic sensations about three a month of three kinds. First neuralgic type, from a draught, easily removed by two grains acetanilid. 2ndly. From strong sun glare. 3rdly. A kind he cannot explain.

Subjoined is a chart of his sensations during eight months while taking *bacillus bulgaricus*.

There have been no paraesthesia nor blurring of vision, no loss of weight, no chilliness, no headaches.

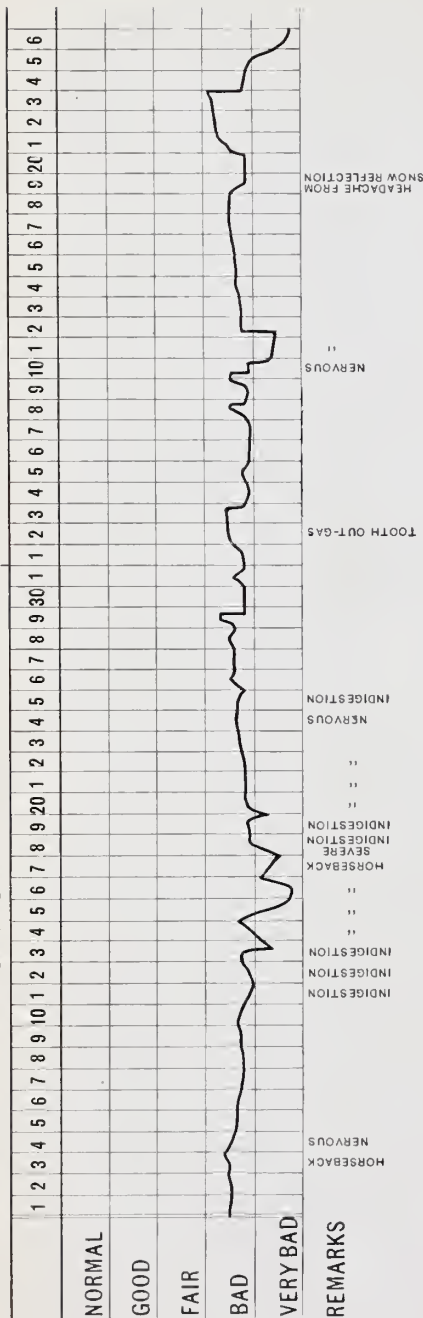
Reflexes are not brisk, pupils equally react, disk normal, visual fields unconstricted, but the eyelids are discolored brownish red and have large veins. Blood pressure 119 and 70 diastolic. Diastolic rose to 75 standing. Pulse 80.

He has lost sexual inclination and power, but had always been under par in this respect.

Experiments were made with injections of pituitrin, adrenalin, pilocarpine, emetine. Pituitrin caused only a slight rise of blood pressure and slowing of pulse and the effects passed off in twenty minutes. Adrenalin hardly affected him and caused no mydriases, a slight fall of blood pressure and slowing of pulse after twenty minutes. Pilocarpine nitrate (grain 1/8) caused flushing and moisture of face and hands, disappearance of slight headache, slight rise

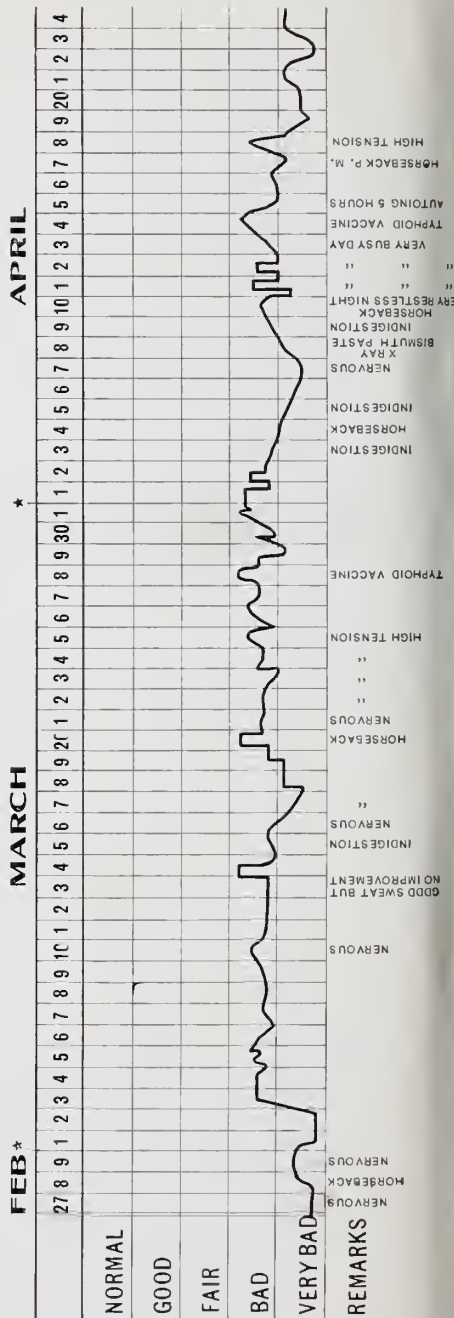
JANUARY

FEBRUARY



MARCH

APRIL



SEPTEMBER

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OCTOBER

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* NOV.

13 4 5 6 7 8 9 20 1 2 3 4 5 6 7 8 9 30 1 2 3 4 5 6 7 8 9 30 1 1 2 3 4 5 6 7

NORMAL

GOOD

FAIR

BAD

VERY BAD

REMARKS

HEADACHE
BACILLUS
STARTED
HEADACHE
INDIGESTION
INDIGESTION
WORSE
NO BETTER
NO BETTER
EYES HURT
VERY
CONGESTED
INDIGESTION
ANTISEPTIC
STARTED
ATROPIA

NOVEMBER

*

DECEMBER

8 9 10 1 2 3 4 5 6 7 8 9 30 1 2 3 4 5 6 7 8 9 30 1 2 3 4 5 6 7 8 9 30 1

NORMAL

GOOD

FAIR

BAD

VERY BAD

REMARKS

INDIGESTION
START
CULTOL
SLIGHT
INDIGESTION
HORSEBACK
TO BED 4 A. M.
NERVOUS
HORSEBACK P. M.
NERVOUS
INDIGESTION
HORSEBACK



Radiograph of skull of case 1 showing lengthening and broadening of Sella Turcica without erosion of clinoid processes or floor. The fossa is elongated to at least twice the normal, and its breadth appears greater also.

Note also the large size of the sphenoidal sinus as well as the frontal. This is the only acromegalic character of the patient's skeleton.

of blood pressure, and pulse rate, slight nausea followed by a fall of blood pressure (fifteen points) severe salivation, blurred vision and slight midriases. Emetine caused only slight midriases and a fall of blood pressure. These experiments showed slight vagotropic tendency only.

That we were not dealing with a psychogenetic case was clear from the history and the psychological reaction of the patient. That so called neurasthenia was not the correct interpretation is indicated by the lack of morbid fatigability.

The peculiar cephalic sensations, the disinclination for exertion and the clouded feeling in the intelligence, not in the nature of torpor, point to aberration of the pituitary gland. Such sensations have been well described as follows by Dr. Mark,¹ himself a victim of hyperpituitarism.

"A general feeling of discomfort, sometimes with intense fatigue. A sensation akin to that of being partially under the influence of an anesthetic or some drug. Sometimes a feeling of restlessness or impatience, with perhaps a craving for food. Most frequently the desire to keep absolutely still. Intolerance of any noise or din. Intolerance of any strong light, of the glare of the sun reflected off the pavement when out of doors.

"When I am at my worst I still seem to be master of all my mental faculties, but lose the inclination to make the best of them.

"It seems as if all one's natural zest were gone. All interest in what is going on around one, or in what is going to happen, is lost for the time being."

In so mild a case, however, I felt that a biological test would be desirable in confirmation. Accordingly Abderhalden tests were made at the Corson White Laboratory in Philadelphia.

The reactions were negative to thymus, thyroid, adrenal, pancreas and testes; but markedly positive to pituitary. Radiograph examination then showed marked enlargement of the sella turcica. (See Radiograph.)

TREATMENT: As testes is regarded as antagonistic to pituitary, didymin was prescribed. In six weeks no benefit

1. The Autobiography of an Acromegalic (London).

was obtained. Thereupon a small amount of thyroid was added, still without benefit. Dr. Foster Kennedy, of New York, who had also seen him, had first prescribed hormotone and later thyroid and adrenal. The latter produced a wakefulness similar to coffee, but no improvement and, as it caused a strained feeling in the heart, he gave it up. Later pituitary gland was taken along with certain drugs with no benefit accrued.

I am now contemplating the röntgenization of the sella turcica, a procedure which has been successful in diminishing pituitary over-growth in two cases previously reported.²

This is a case most instructive in illustrating the need of careful appraisal of the significance of symptoms and reactions in functional nervous disorders; for it is only by the further knowledge gained through minute analysis that cases of this kind that we can learn their natural history and advise measures for their relief, in the attainment of which rule-of-thumb routine is entirely inefficacious.

PARAESTHESIAE AND OCULAR ASTHENIA. A woman, aged 42, was referred by Dr. Wilmer, in February, 1916, on account of a swimming feeling in the head and an aching of the limbs, especially in the heels, pricking sensation, especially in the knees, and great nervousness, trembling and starting on the least provocation. Sleep was irregular. Until eight years before there had been periodic headache, nausea and vomiting lasting about twenty-four hours. There was pain in left shoulder and arm, and loss of power in using the hand. For two years this had extended and the right arm also. For eight years she had scarcely used her eyes, as doing so makes the head swim. Crowds and conversation enervate, may even cause weeping.

She had always been retiring and a blusher. Her nervousness had been greatly aggravated by the death of her father whom she had nursed for fourteen years, during which he had been blind for twelve. The only objective abnormalities were tremor of the hands, enophthalmos, perspiration, slight dermatographia, tachycardia, pulse a hundred,

2. Williams, Adipose Pituitary Syndrome Ameliorated by Deep Röntgenisation, J. A. M. A., 1912. Pituitary Over-Growth Reduced by Radiotherapy, Wash. Med. Annals, 1915, 1916.

standing 114, after five stoops 141. Blood pressure 130 and 90; standing, 125 and 84; and an increase of weight from 129 lbs. to 169 lbs., 29 lbs. of which had come in the preceding year. There was a lymphocytosis of 33%, total white cells being 12,200. There was subcutaneous tenderness. Phenolphthalein returned 50% in 70 minutes (Hagner.)

The condition was regarded as endocrine, and the patient was given mixed hormones and an organic phosphorus.

In a week the blood pressure rose to 145-90; 148-94 standing. The pulse rate fell to 96, 99 and 108 sitting, standing and after five stoops respectively, and she was greatly improved subjectively and had more energy.

The diminution of pulse continued on her return home, falling sometimes to 72 in the morning and 76 in the evening, and averaging under 80, the former a little over 80. There was less pain and she felt better, although still having neuralgic feelings; but some cardiac pain occurred, which I attributed to the pressor hormones being taken.

Two months later the blood pressure had fallen to 124 standing, she had further improved and would sometimes feel rested on waking, which she had not done for some years, while tremor had ceased. The pulse rate, however, had risen towards 90. In September she was not so well again, the hormones having had to be interrupted because of the cardiac distress and anxious feeling they produced. But she still sleeps better, has more strength, has less orbital pain and nervousness and had lost 12 lbs. She was given pituitary gland, and the following month had a return of pains behind the eyes and swimming in the head and aching in the limbs. She was then given anterior lobe of pituitary.

The general nervousness, which was recognized by Dr. Wilmer as so important a feature, was in this case not due to a psychological situation. The woman's attitude towards herself and others was perfectly normal. She had no obsessions, morbid anxieties, phobias or hysterical ideas. The inability to use the eyes without disturbance was due to a neural inadequacy which must therefore have a physical source. That this was of a metabolic nature is to be inferred from the neuralgias, hyperaesthesias, tachycardia,

raised blood pressure and increase of weight, tremor, dermatographia, hyperhydrosis. That hyperthyroidia is concerned is shown by the tachycardia and tremor; but that it is not a sole cause is shown by the lymphocytosis of the blood with the marked asthenia. Some clinicians believe these signs indicate thymus hyperplasia. But in this case no choking sensations are present.

Hyperaesthesia of subcutaneous tissue occurs in the atrophy of anterior pituitary insufficiency. But there is no somnolence to corroborate this.

An opportunity to perform biological tests has been hitherto lacking in this case. Tests with methyl red at three hour intervals showed no acidosis.

The case, however, is instructive as showing the complexity of the data required for the interpretation of a functional case of this type, and that physicians are no longer justified in a diagnosis of prostration or neurasthenia, least of all in attributing to psychoneurosis such phenomena as these. Psychoneurosis has very definite characteristics susceptible of clinical demonstration. The fact that this case is not yet completely adjudicated makes it all the more impressive as an illustration of the objects of this paper.

SUPPOSED NOSOPHOBIC HYSTERIA. A Washington physician was referred by his medical attendants because after an appendectomy he manifested persistent anxiety as to his recovery; and could not be disabused of the conviction that his renal functions were impaired, that cardio-vascular disease was impending and finally that he was losing his mind and that he would be permanently incapacitated for carrying on his work. His physicians regarded his state as hysterical, and had tried to change his mental attitude by chaffing him, and endeavoring to cheer him up, but their efforts were unavailing: so after two weeks I was asked to see him.

I found him anxious and agitated and yet rather ashamed of his emotional weakness, which he tried to laugh away, without, however, attempting to minimize how dreadful he felt. He had scarcely slept for several nights. His pulse rate which had once descended to 82, had remounted to over

100, and the respirations were 22, sometimes being as high as 26 per minute. B. p. 190.

There was no infection to account for his condition; as the wound had healed promptly, except for one small stitch abscess, and the rise of temperature was inconsiderable, as it had steadily fallen since the operation from 102 to 98.8. There was restlessness, throbbing around the heart, lightness of the head, marked insomnia, nausea.

I considered that nothing indicated the case to be psychogenetic and that a physical cause must be sought. As nothing objective except tachycardia and high blood pressure and neural irritability were apparent, and as there was no indication of hyperthyroidism, and the blood pressure had not previously been elevated, I sought for the causes in the post-operative and pre-operative conditions. These were as follows: The infection of acute appendicular abscess, the wakefulness, pain, and nerve strain in driving his motor car from Pittsburg while suffering from acute appendicitis. The preceding anxiety of his father's illness in Pittsburg, the anaesthetic given for the operation, the narcotic given before it, the hypnotics and narcotics given after the operation, the starvation before and after the operation, very little food being given, and that consisting entirely of albuminous substances, at first orange-egg-albumin, later jelly, custard, milk, eggs, chicken, coffee, later a very little toast and still later a little ice-cream. When it is remembered that proper metabolism of an adult at rest needs 2000 cal. of which less than half should come from proteins, the unscientific balance of this dietary stares one in the face.

All of these conditions perturb metabolism, cause toxicosis and predispose to an acid state.³ The acid state interferes with cellular metabolism and may even cause cloudy swelling. The functions of the noble elements are impaired; thus muscles, glands and central nervous system are in disorder.

I suspected that we were dealing with an acidosis, in spite of the absence of acid bodies in the urine. To confirm this inference the alveolar air carbon dioxide tension

3. See Fischer's *Oedema and Nephritis*, 2nd edition (Wiley & Jones, N. Y., 1915).

was measured. It was found distinctly subnormal, being only 28.4 mil. mercury. No other tests were made in this mild case; but treatment was instituted forthwith.

Therapeutics consisted of carbohydrate diet, cornstarch drink during the night, sugar water, puffed rice, and later oatmeal for breakfast with abundance of vegetables and fruit at mid-day as well as the general diet of the hospital. 30 grs. of sodium bicarbonate was also given every four hours.

As a result the patient was improved within two days and within a week was no longer obset by fears and went to Atlantic City, whence he returned completely well in ten days.

The carbon dioxide tension in five days had risen to 32.9.

These three cases are most instructive as showing how inapplicable is a loose diagnosis of hysteria or psychoneurosis or neurasthenia. This is an especially unwise procedure on the part of a clinician whose method is that of exclusion for it is only by positive signs of a psychopathological kind that a psychogenetic disorder should ever be affirmed.

See author's *Nature of Hysteria*, *Internat. Clinics*, 1908, Vol. III. *Dif. Diag. Neurasthe. Arch. Diag.*, 1909. *Treat. of Hysteria*, *J. A. M. A.*, 1912, *Psychogenic Disorders in Children*, *A. J. M. Sc.*, 1911. *J. Abnor. Psychol.*, 1912. *Hysteria and Pseudo Hysteria*, *A. J. Med. Sc.*, 1910. *Management of Psychoneurotic Patients*, *Cleveland Med. Jour.*, 1915.

1705 N St.

THE LATE DR. CHARLES H. HUGHES

AN APPRECIATION

BY T. D. CROTHERS, M. D.,

Hartford, Conn.

THE passing of Dr. Hughes into the other world calls for slight tribute and I am sure that this will be appreciated by many persons and indicates something of the rich rare life that will live in the memories, not only of persons who knew him personally, but those who followed his work.

The details of his birth, education and the events in his life, give mere outlines of how active and stirring it was and how much he influenced the great world's work. Much of his real life history can be found in the pages of the *ALIENIST AND NEUROLOGIST* and more definitely, in the large volume he wrote and the numerous monographs contributed to the press. Beyond this, there was a history and intense personal creative influence which cannot be estimated. Personally, he had a charming reserve and judicial attitude of manner and thought that made him prominent wherever he went and whenever he spoke. He was often mistaken for a lawyer and had that calm demeanor and quiet penetrating gaze, that seemed to measure things and the value of ideas and words before expressing himself. As a lecturer and reader of papers, he was decisive and emphatic, using choice words, that implied his superiority of knowledge and a reserve that attracted attention. In a debate at a medical meeting he showed unusual shrewdness in the statement of facts and assumed a position, that made him an uncertain dangerous antagonist. His views on disputed questions were always clear and practical and started from a scientific point of view, with an undefined judicial dogma-

tism, that not only carried conviction but startled his hearers. He was a very close observer of men and events and read widely, had a most retentive memory to recall the principles and facts of other authors and their relation to the question at issue. His scientific discernment was always clear and never lost its poise. He was constantly measuring facts of science and testing them by his own experience and while these statements may have been doubted in some circles, there was a generous setting and conservative element in them, that always attracted attention.

As a traveling companion in Europe and delegate at two great Conventions, I had a rare opportunity to observe his ability and ease of manner to adjust himself to every possible condition and to be at home with all classes of men. As a guest in the home of a very prominent baronet in Ireland, he was perfectly at ease and in no way disturbed, but fell in with the customs, as if to the manor born.

In a clinic in the worse section of Edinburgh, he was equally at home and his courteous manners contrasted very sharply with the coarse dogmatic doctor in charge. There was a warm sympathy and appreciation, that was never disturbed by the conditions of people and surroundings.

Everywhere he seemed the same courteous, alert discerner of the strength and weakness of his associates.

In a debate which took place at a British Medical Association at Belfast he dissented from the views of some very eminent men on a mental topic. This was stated in such a pleasing, generous way, that his opponent was practically disarmed and finally before the debate was ended, declared that his Yankee friend had convinced him.

Many of his contributions were published abroad and were read, as very suggestive and illuminating statements of the facts. He was not a contraversalist but he often differed on prevailing opinions and based his knowledge on a fund of rich experience, rather than on theory. As an editor, he was broad and generous and very quickly discerned second class matter and false statements concealed in verbiage.

He was also an excellent critic of books and able to recognize the main facts, no matter how concealed they were. He very rarely expressed himself in an offensive way, but usually maintained silence when he could not speak approvingly.

There are very few journals in the field of Mental Science that contain more new and suggestive matter than the *ALIENIST AND NEUROLOGIST*. Many of the papers were revolutionary and outline new fields and his endorsement or praise was always sparing and judicious. There was a certain personality apparent in every issue of the journal which supported the statement in many circles that it was simply Hughes' Journal. In whatever sense this term was used, it always attracted readers who wanted to know what was said. To the critic, there was an evenness of tone and absence of excessive scientific statements of theories unproven as well as simple details of unimportant well-known facts. There was a happy vein which gave lawyers and laymen a conception that the other journals failed to give.

In his printed volume, this practical character and scientific etching were most happily blended. The student of the future who will study the pioneer workers of the past, from their writings, will conclude that Dr. Hughes had a very large conception of neurology and psychology both today and tomorrow and in many ways he contributed very largely to widen the present thought of science and the diseases of the mind.

An acquaintance extending over thirty years and renewed many times every year enabled me to determine the mental range of his life and his accomplishments.

In his early life he had been a very vigorous thinker and had very largely published his conclusions. Later he was annoyed to note that many of his early opinions were restated as discoveries without any reference to their source. Often he called my attention to elaborate papers in which his views were restated with little or no change, showing that the author was dishonest, but in this, there was no bitterness. He expressed pity, that anyone should be so foolish as to become a plagiarist. He was practically one of

those rare men who crossed the world leaving it brighter and better. Those that knew him intimately admired him and in a great many ways he influenced a large class of students who came under his care as a teacher. The death of his wife was the turning point in his life from which he never fully recovered, but his optimism remained until the last. His religious faith was clear, broad and dominant, but reserved, and rarely exhibited. The intense satisfaction of his later days centered around his families and their successes and triumphs. He was a most estimable man and lived a most excellent life and left the world better and stronger for having been here.

SELECTIONS

CLINICAL NEUROLOGY

THE TREATMENT OF EXOPHTHALMIC GOITER.—George E. Pfahler and J. Donald Zulick (The Pennsylvania Medical Journal) believe that the x-ray has a field of distinct usefulness in the treatment of this form of goiter. A preliminary roentgenogram of the chest should be made in all cases in order to obtain some information as to thymic size and as to substernal extension of the goiter. When the thymus is not found enlarged, a single dose directed through the sternum will be sufficient. When it is enlarged, the rays should be passed through two fields on either side of the median line below the clavicles, including the first, second and third spaces. The dosage must be carefully regulated so that the total amount given the patient is known. The series decided upon should not be repeated inside of three or four weeks. Sometimes it is advisable to divide the treatment so as to give a dose through only one or two fields at a time. After there is a distinct improvement in the symptoms, the interval should be prolonged, for there is danger of reducing the secretion of the gland to the extent of producing the symptoms of hypothyroidism.

The authors conclude their study as follows:

"We believe that the trial of treatment for one series with an interval of waiting of one month is justifiable in all cases, for if operation is decided upon nothing is lost, and many operations in this way can be avoided.

"Treatment should be directed toward both the thyroid and the thymus glands.

"An increase in weight and a decrease in pulse rate are the first signs of improvement and are practically always found.

"Treatment must not be prolonged over too great a period or hypothyroidism may be produced.

"The goiter and the exophthalmus are the last to show improvement, and in many cases show no change."—*American Journal of Surgery*.

SIMULATION OF SCIATICA.—Sciatica, having no objective characteristics, is an affection which invites simulation. Patients who have recovered from other affections in hospitals have obtained an extension of their sojourn by this means. Lascgue's sign—accentuation of pain as a result of traction on the limb—is of great value in exposing simulation, but the malingerer soon learns to show pain under this maneuver and to imitate the defense exerted by the true subject of the disease. In *La Riforma Medica*, for July 10, Neri suggests a substitute procedure as follows: The subject is asked to stand and make various indifferent movements, such as elevation of an arm, bending forward, folding the arms, etc. If he has sciatica there will be some embarrassment in flexing the trunk on the lower extremities, flexion is more pronounced on the healthy side, and there is a slight rotation toward the affected side. Or the affected member may be flexed on the body, in which case the heel will be elevated, while the patient, feeling a severe pain at the sciatic foramen, supports himself on the sound limb. In the simulator these flexions are produced without reactions, or defence movements which are wholly instinctive. On the cadaver the author learned that the flexions cause stretching of the sciatic nerve. Vigorous active and passive flexions of the head on the trunk also cause pain in the sciatic nerve of a sciatic victim, this being felt at the sciatic foramen. If the patient is supine, flexion of the head may cause a slight flexion of the hip upon the pelvis and of the leg on the thigh. This defence reaction is sometimes accompanied by clonus. This behavior has been explained by the possibility of a drawing upward of the medulla oblongata, corresponding to the flexion of the head, with a resulting traction upon the nerve radicles. It is evidently, however, not pathognomonic for sciatica.—*Medical Record*.

A NEW TREATMENT FOR GRAVES' DISEASE.—Dr. George Richter (*The Medical Herald*) believes the thyroid gland is most important in the etiology of the disease, but not the sole cause of the variety of symptoms; the entire autonomous system, the sympathetic and vagus nerves, possibly, also, the bulbar portion of the medulla, are involved. There is much evidence of an interrelationship between the various other ductless glands and the thyroid which necessarily suffer in this disease, and especially between the thyroid and the pituitary body; hence he was led to attempt to treat Graves' disease with an extract of the anterior lobe of the pituitary body, of which he prescribed three to five tablets, of five grains each, three times a day, with variable results, though in a few recorded cases remarkable improvement followed, which he concludes "will not occur in every case where this treatment is inaugurated."

NIGHT TERRORS.—Williams regards night terrors as analogous to the phobias of older persons and quotes a number of cases in which the symptoms could be traced to definite incidents in the child's experience or to injudicious education or treatment. He advises not exactly a psychoanalysis after the method of Freud, but a careful interrogation designed to lay bare the root of fear. If this is successfully attained no further treatment may be necessary, but in some cases the child benefits by a sympathetic explanation of the symptoms, a process of re-education, and exercises in mental concentration.—*Edinburgh Medical Journal*.

VOICE DEFECTS FOLLOWING ADENOID AND TONSIL OPERATIONS.—Dr. Walter B. Swift, *Boston Medical and Surgical Journal*, Nov. 18, 1915, states that "Operations for adenoids and tonsils often fail to relieve habits of faulty articulation and consequent school retardation. Vocal drill by one trained scientifically in speech disorder is the surest method to secure speedy permanent relief, in that perfect articulation that makes possible an easy, enjoyable conversation."

NEUROTHERAPY

LOCAL TREATMENT OF NERVE LESIONS.—Hesnard (*Arch. d'electr. med.*, No. 399, 1916) has found a local treatment by x-rays of considerable benefit in cases of injury to the nerve trunks. In addition to the ordinary irradiation of the territory of the affected nerve, he practices a deep and intensive irradiation of the nervous cicatrix and the perinervous cicatricial tissue. He has also employed local massage of the nerve at the point of lesion, as well as mechanical vibration, local heat, and antisclerotic medication. As to this last, he states that the medicament which has given the clearest results is fibrolysin, in intramuscular and hypodermic injections. He has used it in about 40 cases of wounded, with unequal but real results. The result is only obtained at the end of ten or twelve injections at least, and the amelioration is sometimes indicated by painful paraesthesia and tingling in the sphere of the nerve.

Other procedures he has tried have been radium for superficial lesions and galvanization; but no method appears to him to have so great a future in the local treatment of nerve lesions as x-rays. He does not claim to have improved all cases, but the ameliorations form a very large percentage. He only employs surface irradiation in a bad case of adherent superficial cicatrix, and then only during the first sittings. Ordinarily he uses filters of $\frac{1}{2}$, 1 and 2 mm. in thickness, the last most frequently. Hard rays are used (from 6 to 9 degrees Benoist), and as large a dose as is compatible with the integrity of the skin is given. Frequently he practices cross-fire irradiation. Sittings are repeated every five or six days. Sometimes the relief is immediate, and shows itself in a much greater facility of movement and a diminution of painful phenomena. He has also seen amelioration in cases of intense motor trouble with complete right deviation and very pronounced muscular atrophy. In some cases slight disturbances of sensation have been produced, such as paraesthesia and neuralgia, but these have disappeared little by little, while at the same time there has been greater or less recovery of the motor

functions. The more recent the lesion, and the more accessible owing to its superficiality, the more successful is the treatment. X-rays appear to act like other procedures, but in a more elective fashion, against the sclerosis.—*Brit. Med. Jour.*, July 15, 1916.

THE MANAGEMENT OF THE SPEECH DEFECT PROBLEM IN THE PUBLIC SCHOOLS.—Walter B. Swift (Educational Administration and Supervision, March, 1916) believes that the management of the speech defect problem in the public schools demands a medical speech inspector to see all pupils and assign them to either a phonetic, stuttering, or a special class, and to have at the head of each of these divisions a teacher specially trained in one of these lines alone.

NEURO-DIAGNOSIS

TOE REFLEX.—Boveri, *Riforma Medica*, Naples, relates that if the patient lies prone, on his stomach, with legs held straight up in the air, feet at right angles to the leg, thus outlining almost a Z, attempts to elicit the Achilles tendon reflex may fail and another reflex may be elicited in its place, the bending of the second phalanx of the big toe. Study of the cases in which this toe reflex occurs shows that it does not occur in the normal or when the Achilles reflex can be elicited. It seems to be restricted to cases of injury of the spinal cord, spinal nerve roots or sciatic nerve. The men presenting this reflex had been wounded in the spinal roots or sciatic nerve, mostly the latter. The percussion must be applied directly to the Achilles tendon. In cases with complete section of the sciatic nerve this reflex did not occur, and its appearance later was a sign of improvement. It seems to accompany only a partially destructive process. He suggests a theoretical explanation for this reflex, and describes some typical cases in which it occurred.—*Jour. American Medical Association*.

AN OCULAR COMPRESSOR FOR THE OCULOCARDIAC REFLEX.—Roubinovitch, *Le Caducee*, describes the now well-

known Aschner phenomenon in which compression of the eye can be made to cause changes in the cardiac rhythm. In the normal individual there results a slowing of the heart beat of from four to ten pulsation, while in many pathological states the rhythm is distinctly altered; bradycardia or acceleration may be produced. Hitherto the clinician has made compression with his fingers, or, rather, an assistant compresses the bulb while the clinician investigates the rhythm of the heart. At times three persons are required to make the test. Hence the need for some mechanical device which will replace the individual. Such would have to be absolutely painless, supple, regular, measurable, durable and aseptic. The base of the author's device is an ordinary spectacle frame with frontal, nasal and ocular attachments in which coaptation is accurate. Pressure on the eye is effected by an automatic mechanism which admits of perfect control, so that any degree of compression may be obtained, and afterward maintained by a spring device. Through the use of this compressor all the results of digital compression have been verified. In epileptics the reflex is expressed in the great majority of cases by an acceleration of the pulse rate.—Medical Record.

REFLEX DISTURBANCES AND CEREBRAL INSUFFICIENCY.—Mezie (*Gazette Hebdomadaire des Sciences Medicales de Bordeaux*), like others, has noted reflex disorders in a great variety of wounded soldiers, comprising contractures, pareses, paralyzes, hypotonias. They are accompanied by troubles of sensibility, trophic disturbances, vasomotor and thermic disorders, and alterations in the blood pressure, as determined by Pachon's oscillometer. In addition, such conditions as edema, refrigeration, cyanosis and profuse sweats, cause suspicion of reflex disorders. According to Babinski and Froment the wound of the extremity produces these reflex disturbances chiefly on the corresponding side through the intermediary of the cells of the cord, some of which are activated and others muffled. Cerebral fatigue acts as a contributory cause. The author would make cerebral insufficiency a most important factor. In these patients there are numerous

evidences of this insufficiency, both physical and mental. The condition may be due to mental over-activity and fatigue or to commotion. Persistent insomnia and repeated emotions play their part as does an innate cerebral inferiority. The various forms of physical therapy give the best results in treatment.—Medical Record.

NEUROLOGY

A CRIMINAL EPILEPTIC, WITH CONSIDERATION OF EPILEPSY AS A MEDICOLEGAL PROBLEM.—Dr. N. S. Yawger states that medicolegally the mental manifestations of epilepsy were divided into two groups: (1) Paroxysms in which the individual is not insane, but in which he may be irresponsible (a) irresistible impulses or impulsive acts; (b) the state of automatism; (2) paroxysms in which the individual is insane; these may be (a) acting under the domination of an insane delusion; (b) in a maniacal epileptic outbreak. The fact that epileptics are highly dangerous, despite long intervals of lucidity, made it desirable that the insane epileptic be committed by court procedure rather than by certificate. Report was made of a patient who had after six jail detentions been placed in a State hospital. The attacks in this case had been for the most part but momentary.—Medical Record.

NEURO-PATHOLOGY

TYPES OF HYDROCEPHALUS.—Edward L. Carnell (International Abstract of Surgery) suggests a new classification, having a physiological background with direct clinical application:

1. Hydrocephalus obstructivus.
2. Hydrocephalus nonabsorptus.
3. Hydrocephalus hypersecretivus.
4. Hydrocephalus occultus.

1. In hydrocephalus obstructivus there is mechanical obstruction to the natural drainage of the cerebrospinal fluid

from one or more ventricles into the subarchnoid space, where the absorption takes place. This obstruction may be due to a congenital defect such as absence of the aqueduct of Sylvius or, as is more frequently the case, it may be the result of adhesions from a pre-existing inflammatory lesion. If the aqueduct of Sylvius is lacking or closed by adhesions, there will be a dilation of both the third and the lateral ventricles, while a closure of the foramen of Munro would cause merely an enlargement of the lateral ventricle on the affected side. If, as is often true in cases of high-grade but evenly-distributed hydrocephalus, the passage of the fluid through the foramina of Magendie and Luschka is blocked, there will be a general dilation in which all the ventricles participate.

2. In hydrocephalus nonabsorptus absorption is delayed or defective, has been proved by the phenolsulphonephthalein test. Whether the restricted absorption is to be attributed to (1) the cutting off of part of the subarchnoid space by adhesions, (2) a toxic substance in the fluid which prevents its absorption by the venous channels, or (3) whether it is due to an abnormal condition of the agents which transport the fluid to the venous circulation, is still a matter of conjecture.

3. By a process of elimination and by a careful consideration of the normal physiology of the cerebro-spinal fluid and of possible changes under abnormal conditions, the third type, with apparent excessive accumulation of fluid, has been attributed to hypersecretion—hydrocephalus hypersecretivus. Since it has been conclusively proved by morphologic and histologic studies of the choroid plexus, by chemical analysis of the fluid, by a study of the effect of choroid extract on the secretion of cerebro-spinal fluid, that the cerebro-spinal fluid is the secretory product of the choroid gland, it would seem logical to suppose that a pathologic condition of the gland itself or a toxic substance in the fluid coming in contact with the plexus might bring about a hyperactivity of its cells.

4. The author includes in the varieties of hydrocephalus a fourth type, for which the term hydrocephalus occultus has

been chosen, which though paradoxical, is otherwise appropriate. The condition thus designated occurs usually in children, though occasionally in adults, and is characterized by excess of fluid in the ventricles, basal cysternae, and sometimes throughout the subarchnoid space, without there necessarily being any increase in the cranial dimensions. Symptomatically, this condition may be more closely allied to tumors, but, from the point of view of treatment, it properly belongs to the problems of hydrocephalus in that the essential feature is an excessive accumulation of cerebrospinal fluid in the subarchnoid space.

The clinical tests may be summarized as follows:

First examinations:

1. Lumbar puncture.
2. Withdrawal of 1 ccm. of cerebrospinal fluid.
3. Attach 2 ccm. record syringe filled with 1 ccm. neutral solution of dye.
4. Withdraw piston until syringe is full.
5. Inject solution slowly into lumbar subarchnoid space.
6. Withdraw needle.
7. Test urine for phenolsulphonephthalein every five minutes until dye is detected.
8. Estimate the total amount of dye excreted in the first 2-hour specimen of urine.

Second examination on the following day, or after dye is no longer found in the urine:

1. Puncture of the lateral ventricle.
2. Inject 1 ccm. neutral phenolsulphonephthalein solution.
3. Lumbar puncture; examine for dye every five minutes until dye appears.
4. Test five-minute specimens of urine.
5. Estimate total amount of dye excreted in first two-hour specimen.
6. In calculations, the amount of dye lost by lumbar puncture must be taken into consideration.

The simplest and most effective method of dealing with hydrocephalus obstructivus is puncture of the corpus callosum, the *Balkenstich* of Anton and Bramann.

In the non-absorptive type, greater technical difficulties are encountered. With some reservation, because his technique is in the developmental stage, the author recommends the establishment of a drainage tract into the pleural cavity. When the lesion is due to hypersecretion, he resorts to thyroid feeding.—Pacific Medical Journal.

THE SYNDROME OF THE GLOBUS PALLIDUS.—Dr. J. Ramsay Hunt reports (Journal of Nervous and Mental Diseases, November, 1916) the results of his studies of a case of juvenile type of Paralysis Agitans which began at the age of fifteen years and patient died at forty, of exhaustion, heart failure and edema of lungs, in which post-mortem investigation disclosed no pathological changes of the viscera or ductless gland system, and no changes in the nervous system were noted except in the corpus striatum and these consisted of "atrophy and diminution in the number of large motor cells of the globus pallidus system. The blood vessels were nowhere thrombosed nor occluded and only a very moderate degree of arterio-sclerotic change was noted in certain of the vessels of the cerebrospinal axis. There were no evidences of inflammatory changes or gross lesions."

Dr. Hunt believes it to be a primary atrophy (abiotrophy) of the motor, or efferent, globus pallidus system.

The two syndromes of the corpus striatum (Vogt's and Wilson's) are described, and the physiological basis for each given.

The syndrome of the globus pallidus has the paralysis agitans syndrome pure, viz., paralysis of certain automatic and associated movements, rigidity and tremor.

SYNESTHESIALGIA.—This term is used by some neurologists as a condensation of synesthesia algica, a rare phenomenon encountered in lesions of the median and sciatic nerves, in which there is pain referred to the hand or foot which is not in the area of distribution of the affected nerve, and has no relation to the ordinary neuralgic or neuritic

pains proper to the nerve trunks themselves. Weir-Mitchell associated certain pains (causalgia) with areas of glossy skin and ascribed both to the presence of a neuritis. Meige and Benisty referred this sympathetic pain to a vascular component—alterations in the blood-vessels. Leriche believed that both pain and trophic changes (glossy skin) were due to inflammation of the sympathetic fibres. Souques suggested the operation of a reflex mechanism. An article in the *Rivista Critica di Clinica Medica* for August 12, calls attention to some recent work in this field by Micheli who reported two cases of causalgia from nerve injury associated with synesthesialgia. The former symptoms could be ascribed to vasomotor and trophic alterations which occur in specially disposed individuals, viz., those with increased vasomotor excitability. Stimuli proceeding from these areas make themselves felt on sound portions of the skin. The patients always seek to relieve the burning pain of causalgia with moist applications, hence the parts become macerated. Micheli places a rubber glove or sock on the affected hand or foot, and in this way protects the surface from outside irritation. Leriche reports a sympathectomy or resection of the perivascular sheaths for a length of 8 or 10 cm., which has given him good results.—*Medical Record*.

METABOLISM STUDIES OF ANGIONEUROTIC EDEMA.—T. Grier Miller and O. H. Perry Pepper (*The Archives of Internal Medicine*) had under observation, more or less constantly, in the wards of the university hospital for a period of eight years, a woman suffering at irregular intervals from attacks of transient edema, sometimes with convulsions and with a persistent but variable eosinophilia.

The patient was the subject of many detailed studies, planned with the object of throwing light on the etiology or exact nature of her condition, from which the following conclusions were presented:

"1. The attacks of swelling in an individual with an obscure type of angioneurotic edema are associated with a retention of nitrogen, which is greater than appears in intervening periods.

"2. The excretion of acid bodies, so far as it can be determined by estimations of the total acidity and ammonia excretion in the urine, is not altered during these attacks.

"3. A disturbance of the sodium chlorid metabolism is evidenced by a reduced elimination during the three or four days preceding the maximum swelling and by a corresponding excess of excretion afterward.

"4. The convulsions from which the patient suffers are not associated with a nitrogen balance which is significantly different from that of normal periods, and there is no coincident change in the acid, ammonia, or sodium chlorid excretion.

"5. A low chlorid intake appears to have a beneficial effect on the attacks of edema, but does not influence the convulsions."

NEURO-PHYSIOLOGY

SOME FUNCTIONS OF THE THYROID GLAND AND THEIR RELATIONSHIP TO GOITRE.—Sydney Pern (Medical Journ. of Australia, June 17, 1916) states that goitre is the result of a constant call on the thyroid's activity, and that this call is due in a large number of cases to toxins. In cases of tubercle of long standing signs of hypothyroidism are frequently seen. In thyrotoxic goitres infection has been found in the tonsils, antra and other nasal sinuses, and at the roots of the teeth. These are the most common localities of infection. It is most satisfactory to find such a focus, as one can then feel sure of a lasting benefit by treatment. Pern has so frequently found a septic focus in cases of Graves' disease that he is driven to the conclusion that there must be one somewhere in the large majority of cases of this disease. He draws attention to the fact that suppuration of one or other of the nasal sinuses may be present for years without being recognized. Also that latent suppuration may be first at the roots of teeth. Pern

working on these lines on a large number of cases has had marked success. When the septic focus is removed the thyroid responds to medical treatment and he has not found it necessary to remove any gland in a single case. During pregnancy the thyroid frequently enlarges through having to deal with toxins; if it is unable to do this albuminuria may result. Thyroid extract gives good results in these cases.

The next function of the thyroid is its vaso-dilatory function. The sudden onset of exophthalmic goitre after shock or fright is explained by the adrenals suddenly discharging an excess of secretion which has to be met by a large thyroid output.

The third function is that of the metabolism of calcium salts. In Gippsland goitre with mild thyrotoxic symptoms is very prevalent. The people get an insufficient quantity of lime, rain water is used, vegetables are scarce, and the young people who have so much milking to do get a disgust for milk and will not drink it: thus the chief available source of life is cut off. When treated with calcium salts a large number of these goitres disappear. Goitre is prevalent in limestone hilly countries, but in this type there are no thyrotoxic symptoms. The thyroid and parathyroid control calcium metabolism. A constant over supply of this element will lead to hypertrophy. If there were more calcium in Gippsland and less in the goitrous areas in Switzerland, goitre would not be so prevalent.—Index of Oto-Laryngology.

NEURO-SURGERY

NEUROPLASTY.—Dr. J. D. Hayward, in presenting a patient before the St. Louis Medical Society, said:

"I feel that it will be of interest at this time to report a neuroplastic operation which I performed on a patient in December, 1912. The case came under my observation about four months after he had sustained a very severe

injury which had necessitated an amputation of his right arm, four inches below the shoulder. The left humerus was fractured a little below the middle and his arm was practically useless because of musculo-spiral paralysis, the nerve having been encased in the bony lesion. There were certain points of interest exhibited in this case which enabled us to definitely locate the lesion. By bringing the forearm down beyond a right angle, there was slight power of extension. Supination, when the forearm was extended, was entirely lost. There was slight supination when the forearm was flexed. The patient also exhibited complete wrist drop with loss of extension in the phalanges. Sensation on the posterior aspect of arm was normal. There was a hypersensitiveness over the outer half of the posterior surface of the forearm which indicated neuritis. There was also a complete loss of sensation over the distribution of the radial nerve. (Now let us locate the lesion.) He had a slight extension of forearm and unimpaired sensation on the posterior aspect of arm because the lesion was below the point from which the inner part of the triceps and the cutaneous area above mentioned, receive their nerve supply. The lesion was also below the origin of the nerve to the posterior surface of the outer half of the forearm. Sensation over that area was not lost; on the contrary, it was hypersensitive. The nerve was caught above the branches to the supinators, because the function of these muscles was destroyed. When the arm was flexed, the patient exhibited slight supination because in that position the biceps has a supinating function and it is supplied by the musculocutaneous nerve which was not involved. Thus it was very clear that the lesion was between the internal muscular and cutaneous branches above the elbow and the bifurcation of the main trunk into radial and posterior interosseus.

“Operation: An incision was made along the inner border of the brachioradialis muscle. When the intermuscular septum between the brachioradialis and the brachialis anticus was reached, these muscles were separated with the handle of the knife. At this point the nerve should be visible, but it was not; so the incision was lengthened

above and below the bony enlargement and a search was made for the points of entrance and exit of the nerve. A neuroma was found on the central end; the distal portion was found escaping from the bony structure about a half inch above the bifurcation into the radial and posterior interosseus. By chiseling into the bone, we found that the nerve was destroyed between the points of entrance and exit. It was necessary to fill in a gap of two inches where there was no nerve substance. Passing the blade of a sharp knife through the center of the proximal portion about one eighth of an inch from the distal end, the nerve was divided longitudinally for more than two inches. This segment was then reversed and sutured to the distal portion just above the radial and posterior interosseus. I might add that when the segment was reversed, it was carried away from the bone while fascia and muscle were stitched beneath it. This was done in order that the nerve would not again be imprisoned during the process of repair. Before the skin incision was closed, it could be seen that the nerve, instead of running next to the bone, which is its normal position, was practically sub-cutaneous.

"The arm was placed in a right angle splint for a period of four weeks after which it was given passive motion and massage. The galvanic and faradic currents were alternately administered. The results in this case were remarkable and clearly illustrate the rapid regeneration which takes place in a cerebro spinal nerve.

"At the end of four months sensation over the affected area was entirely restored; extension and supination of the forearm were complete; there was no wrist drop; there was no impairment in the extension of fingers.

"In doing neuroplastic work, we must not overlook the factors so essential to success. 1st. The nerve to be repaired must possess a regenerating membrane, the neurolemma. 2nd. The axis-cylinders must be accurately adjusted without the interposition of connective tissues. There must be perfect asepsis. Passive motion, massage, and electricity must be faithfully administered."

PSYCHOLOGY

SOME DEVELOPMENTAL PSYCHOLOGY IN LOWER ANIMALS AND IN MAN, AND ITS CONTRIBUTION TO CERTAIN THEORIES OF ADULT MENTAL TESTS.—Walter B. Swift (American Journal of Psychology, January, 1916) has tried to show that all these related theories serve in the formulation of exhaustive tabulations of mental tests which should cover the ENTIRE LIFE with all of its variations. Mental tests should relate all sensorial content, all interpretative reaction, all forms of collaboration, all controlled methods of expressive output according to the correlations laid down in the theory of the whole and the parts. It should be kept in mind that these are dominated in the different life periods by sense, affection, will and intellect respectively, each of which is relegated in succession to its subordinate place. These should be related in such a way as to picture the past, present and future of all possible mental types in their perfected development and the percentage relationship should be shown between the present individual and his final, ultimate, developmental perfection.

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Any comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or "mouths of wisest censure."

NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

Editorial and Business Offices, 3858 West Pine Boul.

EDITORIAL

A SALUTATORY AND VALEDICTORY

THE DEATH OF DOCTOR CHARLES H. HUGHES, editor and founder of the ALIENIST AND NEUROLOGIST, followed soon thereafter by the demise of his son, Henry L. Hughes, who was acting as Business Manager, were links of a chain of circumstances, which resulted in the loss of manuscript of collaborators and several books for review, which were intended for this issue.

With this handicap, I consented to temporarily undertake the editorial management of this journal, pending permanent arrangements for its perpetuation, which will be under the supervision of Doctor Marc Ray Hughes, well known as a Neurologist and Psychiatrist, and will be published by Mr. Clarence H. Hughes, who, under the firm name of Hughes Printing Co., has printed the journal for the past 25 years. Both are sons of the late editor and are conversant with the duties devolving upon them.

Although I undertook the work with misgivings, I accepted the obligation in the emergency without hesitation, and this volume is mute evidence of my temerity.

It is self-evident that no apology is necessary for the contributions of the collaborators who so promptly responded to my appeal, and to whom I herewith express my grateful appreciation.

It is the aim of the new management of the ALIENIST AND NEUROLOGIST to maintain the high standard set by its founder during the many years of his editorial labors, and it is my wish that its growth and influence will ever continue.

DAVID S. BOOTH.

RESOLUTIONS OF THE NEW YORK NEUROLOGICAL SOCIETY.—At a recent meeting of this society the following resolutions were unanimously adopted:

Whereas. Anterior poliomyelitis and its concomitant polioencephalitis are intrinsically neurological diseases, and

Whereas. Anterior poliomyelitis and polioencephalitis have been managed in all stages in the recent epidemic practically without the supervision and control of neurologists in the institutions of Greater New York, and

Whereas. In order to avoid faulty diagnosis, inadequate treatment, and poor methods of gathering important statistics, resulting not only in detriment to the present patients but also in a final loss to scientific medicine of valuable data of great service in future epidemics; be it

Resolved. That it is the sense of the New York Neurological Society that anterior poliomyelitis and polioencephalitis,

being neurological diseases, the sufferers from such diseases ought at an early period to come under the care or supervision of neurologists, with the co-operation of orthopedists and other specialists as the cases may require. And, in consideration of the unprecedented number of cases in the recent epidemic, in all public institutions and clinics where these diseases are treated, there should be a standardization of equipment and method. And be it

Resolved. That the New York Neurological Society petition the Committee on Public Health of the New York Academy of Medicine that it consider the advisability of appointing at once a commission on poliomyelitis which shall take into consideration the ways and means best calculated to meet and combat a future epidemic similar to the one we have just experienced and make definite recommendations for same. This commission shall consist of four subcommittees, as follows: (1) A committee on communicability and quarantine, comprised of bacteriologists and epidemiologists. (2) A committee on the criteria of diagnosis and clinical management, to consist of neurologists, pediatricists, and orthopedists. (3) A committee on pathology and serology, to consist of pathologists who shall devise the best means of caring for such pathological material as is obtained as a result of the epidemic. (4) A committee on treatment and immunization, to consist of neurologists, orthopedists, pediatricists, and bacteriologists. This committee shall consider the therapeutic means best adapted to the acute stage and also to the after treatment.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION held its annual meeting in St. Louis, November 20th and 21st, 1916. Many of the most prominent leaders in social hygiene work were present, and addressed public meetings upon various phases of social hygiene. Among the notable leaders were Dr. Abram W. Harris, President of the American Social Hygiene Association; Mr. Jerome D. Greene of the Rockefeller Foundation; Dr. William F. Snow, General Secretary of the American Social Hygiene Association; Dr. J. N. Hurty, Commissioner of Health of Indiana; Dr. S. J. Crumbine,

Commissioner of Health of Kansas; Dean Herbert L. Willet of the University of Chicago; Dr. W. A. Evans of the Chicago Tribune; Dr. William A. Pusey of the School of Medicine of the University of Illinois; Attorney General George Cosson of Iowa; Dr. George R. Dodson, President of the St. Louis Social Hygiene Society; Mr. J. Lionberger Davis, Chairman of the Committee of One Hundred, St. Louis; Mr. Percy Werner, St. Louis, member of the Board of Directors of the American Social Hygiene Association; Mr. Samuel P. Thrasher, of the Committee of Fifteen, Chicago, and numerous other of the most prominent leaders in the social hygiene field.

At a business session, November 20, Robert S. Brookings of Washington University and Dr. Edward A. Alderman of the University of Virginia were elected vice-presidents, and President David Starr Jordan of the University of California and Bishop Walter T. Sumner of Oregon, honorary vice-presidents. Dr. Hermann M. Biggs, New York, and Dr. William A. Evans, Chicago, were added to the board of directors. Dr. Charles W. Eliot, president emeritus of Harvard University, and Dr. Abram W. Harris were re-elected honorary president and president, respectively. All other officers were re-elected.

It was decided to organize a state association of social hygiene in Missouri, and employ a salaried officer to promote its propaganda throughout the state.

COMBATING INSECTS AFFECTING THE HEALTH OF MAN.—Continued advances in the work of combating the activities of insects affecting the health of man are reported by the Chief of the Bureau of Entomology of the U. S. Department of Agriculture in his annual report recently issued. In mosquito investigations in Louisiana a species of mosquito hitherto considered a noncarrier of malarial infection was proved to be a carrier. Studies have been made of malaria and measures are being evolved to meet plantation conditions.

The "starvation" plan, aimed to exterminate the spotted fever tick of the Bitter Root Valley, Montana, was followed during the year with encouraging success. The plan consists

of the removal of the domestic hosts of the adult tick from the infested areas. The Bureau also conducted a campaign of extermination against ground squirrels and other rodent hosts of the immature ticks. Examination of the rodents killed showed 40 per cent lower infestation by the tick than during the preceding year.

The report directs attention to the demonstrations of the Bureau specialists that the breeding of flies in manure can be prevented by treating the substance with calcium cyanamid and acid phosphate, which at the same time increase the fertilizing value of the manure.

The Bureau also conducted investigations into methods of lessening fly infestation in packing establishments operated under the Meat Inspection Service of the Department.

THE NATIONAL BOARD OF MEDICAL EXAMINERS held its first examination from October 16 to 21, in Washington, D. C. There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination; of these, five passed.

The second examination will be held in Washington, D. C., June, 1917. Further information may be had by applying to Dr. J. S. Rodman, Secretary, 2106 Walnut Street, Philadelphia, Pa.

THE NAME OF THE LOUISVILLE MONTHLY JOURNAL OF MEDICINE AND SURGERY has been changed to the MISSISSIPPI VALLEY MEDICAL JOURNAL, and becomes the official organ of the Mississippi Valley Medical Association, the proceedings of which, both papers and discussions, in full, will henceforth be published in its own official organ.

The former editor, Dr. Henry Enos Tulcy, becomes the Secretary-Editor, with offices at 705 South Third St., Louisville, Ky.

THIRTY-SEVEN VOLUMES COMPLETED.—The present number completes the thirty-seventh volume of the *ALIENIST AND NEUROLOGIST*, and during these thirty-seven years, it has never missed an issue and all, except the last two numbers, of which were published under the direct editorial supervision of its editor and founder who, upon the completion of its twenty-eighth year, had this to say editorially:

“THE TWENTY-NINTH YEAR in the life of the *ALIENIST AND NEUROLOGIST* begins with the next number after the present. Its editor and founder believes it has fulfilled its birthday promise to give to the general practitioner, especially and to the Alienist, Neurologist and Psychologist also, clearer conceptions of Neurological, Psychological, Neuriatrical and Psychiatrical medicine. Its birthday prophecy also dawns in fulfillment, viz: that ‘Neurology and Psychology are destined to reign paramount in medical thought.’

“The *ALIENIST AND NEUROLOGIST* approaches the New Year prosperous and hopeful of further prosperity and usefulness in its chosen lines of professional endeavor and with hearty thanks for the generous support, financial, collaboratorial and otherwise contributory, it has so lavishly received from capable sources of appreciation in the medical profession. It notes and acknowledges with gratitude the wonderful advances, since its foundation, in Psychiatry and Neurology especially, among the master minds in medicine who have contributed to its pages and advanced it in professional appreciation and financial success.”

Amen.

CORRESPONDENCE

NAPOLEON AS A STUDENT OF RELIGION.—Incredible as it seems in view of the eighty-odd thousand items in the Napoleon bibliography, much is still unexplained or misunderstood as to him and his career: even such important factors as the causes of his physical and mental decline, during the last fifteen years of his life, apparently must await further advances in knowledge of the internal secretions¹. An aspect of his activities, evidently much distorted, is that of his relations to religion; during the half-century next after his death, many edifying details were believed as to his final reconciliation to current religion but these have practically died out as being pious forgeries². On the contrary, even with the view of his weakened mind at St. Helena, given by the inadequate reporters there whose accounts alone have come to us hitherto³, he appears to have maintained his position as precursor of "that strictly modern product, the student of religions who often is believer in none"; a good piece of evidence is that mentioned by Lord Rosebery⁴, that the ante-library of Napoleon's cabinet consisted chiefly of books on theological subjects, and that these were his favorite study; interrogated thereon, Talleyrand replied: "*Je suis porte a eroire qu 'il etait croyant, mais il avait le gout de ees sujets.*" There is much to confirm the position of a sound and stimulating historian⁵ that it was unkind fate only that forced Napoleon to war rather than to the study of pure science which was his desire; deprived of chance to acquire the fundamentals for this study, he replaced it by the study of religion which appeared to need no such foundation. He had, too, some opportunities denied to the ordinary scholar, for instance, access to the manuscript of Josephus⁶, suppression of which has kept the question actively open to this day⁷.

Unluckily no record (so far as I know) exists as to what he really thought when in his prime, and we are driven to the dismal reports of what he said in his deep decline as they come to us through the writers at St. Helena; "the one capital and supreme record"⁸ is Gourgaud's who was more honest and more stupid than the rest. In his Journal⁹, Napoleon's often repeated statement was "I should believe in a religion if it existed since the beginning of the world"; so the yearnings of Napoleon were a century ahead of the evidence now available.

Boston, Mass., Sept. 30, 1916.

Charles-Edward Aab.

(1) See "Did Napoleon Bonaparte suffer from hypo-pituitarism ('Dystrophia adiposogenitalis') at the close of his life?" (Guthrie in "Proceedings XVII International Congress of Medicine," London, 1913, Section 23, History of Medicine, pp. 143-154.)

(2) (London) "Notes and Queries," II series, vol. X, p. 195.

(3) Hopes are high as to release of the 2,000-odd Gorrequer papers, closely guarded by the Court of Chancery in London, under an affidavit of 1855; this sets out the politically-dangerous character of these papers, etc., and is copied in a letter to the (London) "Times Literary Supplement," June 8, 1916, p. 273, (and see pp. 285, 309). Maj. Gorrequer had a unique position: official intermediary between the St. Helena and home governments, while privately a sympathizer with Napoleon and, speaking French perfectly, reporting in his day-books sundry conversations and his observations thereon.

(4) "Napoleon: the Last Phase." London, 1901, p. 190.

(5) Dr. Cahanes' "Did Napoleon Miss His Vocation?" (French text in 2d. series of "Les Indiscretions de l'histoire," pp. 142-170.)

(6) Gourgaud (as below), II, p. 270: "J'ai pris a Hilan un original de l' Histoire des Juifs, de Joseph, ou on voyait qu'on avait intercale entro les lignes quatre ou cinq mots pour parler de Jesus, car Joseph n'en faisait pas mention. Le pape m'a bien tormenté pour avoir ce manuscrit."

(7) For instance, these 1913 items; pro "Flavii Iosephi locus qui est de Iesu Christo" (Slypen in Enemosyne, 41. 1); contra, "De antiquissimis vaterum quae ad Jesum Nazareum spectant testimoniis" (Linck).

(8) See Lord Rosebery (as above), pp. 38, 52, 7, 6, 182, etc.

(9) "Sainte-Helene: Journal Inedit de 1815 a 1818" (General Baron Gourgaud, Paris, 1898); pp. 441, I; 270, II, etc.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE MYTHOLOGY OF ALL RACES.—Edited by L. H. Gray (and about a score of others for the 13 volumes, sundry of which have been published, at \$6 each.) Boston, Marshall Jones Co., 1916.

These beautiful volumes form perhaps the most elaborate attempt yet at Bowdlerizing. They bear about the same relation to the source books on mythology required by the scientist, as the nursery editions of the 'Arabian Nights' bear to Burton's. The American Journal of Psychology for October states, indeed: "We shall look forward with great interest to see what attitude the editors take with regard to the new psychoanalysis of myths," but it will doubtless look in vain; the general editor states (preface, p. xv): "It will perhaps be well to stress the fact that there will be nothing in our series that can be, in Roman Catholic phrase, 'offensive to pious ears.' In this respect, the editor is happy to say, his duties of censor have been practically a sinecure." This is borne out by the editor of vol. I in alleging reasons why "the interpretations which I have offered are of necessity far from exhaustive."

It is doubtless too much to expect from editors of such a work that they should have that rare talent of writing at once in two tongues (like a famous inscription near Genoa reading easily in the vernacular as Italian but being good Latin for the learned); if they had such, they could dress the naked "day-dreams of the race" (often utterly savage) so as to make them presentable on drawing-room tables (*tafelstuhlgemäße*, as it were.) Such a talent is the gift of Dr. Coriat, whose recent "Meaning of Dreams" can offend no one except the psychoanalysts who sometimes are represented there as a silly folk making elaborate investigations which appear to lead nowhere. A great success in this

line was that of one of the earliest students of Harvard College who afterwards wrote dramas for the court of Charles II, John Crowne; he is called Crone at pp. 25-27 of the 1913 book: 'A Stuart Princess and Queen of England: Life of Mary II,' who, in young womanhood, took the title-role in 'Calisto, or the Chaste Nymphe;' this was a court masque wherein Crowne accomplished the 'impossible' task imposed on him, to-wit: of writing "a clean, decent and inoffensive play on the story of a rape."—C. E. A.

DIAGNOSIS AND TREATMENT OF SURGICAL DISEASES OF THE SPINAL CORD AND ITS MEMBRANES.—By Charles A. Elsberg, M. D., F. A. C. S., Professor of Clinical Surgery at the New York University and Bellevue Hospital Medical College. Octavo of 330 pages, with 158 illustrations. Philadelphia and London; W. B. Saunders Company, 1916. Cloth, \$5.00 net.

While this work is written primarily for the surgeon, it is equally valuable to the general practitioner, and probably also to the neurologist, since it will acquaint them with the possibilities from surgical intervention in many conditions, some of which, as hematomyelia and spinal gliosis, may not have presented themselves as proper conditions for operation.

Furthermore, the work contains highly valuable chapters on diagnosis, as evidenced by the following from the table of contents: Surgical Anatomy of the Vertebral Column and Spinal Cord; Normal and Pathological Physiology of the Spinal Cord; Localization of the Motor, Sensory and Reflex Functions in the Different Segments of the Spinal Cord; Symptomatology of Spinal Diseases; Symptoms of Spinal Disease at Different Levels, and in Different Regions of the Cord; Method of Examination; X-Ray in Spinal Disease; the Differential Diagnosis of Surgical Spinal Lesions and Spinal Puncture.

So long as the subject is mentioned, it is regrettable that "Railway Spine" is not more fully discussed, since it would probably elucidate the expressions; "a pure traumatic neurosis," and "the patient begins to complain of a host

of nervous disturbances," as used in the following paragraph on this subject:

"For the sake of completeness, the condition once described as railway spine—a pure traumatic neurosis—must be mentioned. After a slight injury to the back, in which there has been no reason to suspect a gross injury to the spinal cord, the patient begins to complain of a host of nervous disturbances—headache, weakness, cardiac palpitation, loss of memory, etc. * * * There is no organic basis for the symptoms."

The addition of numerous illustrations, which are largely original and exceptionally clear, makes the book an ornamental, as well as a most useful, addition to the practitioner's armamentarium.

THE DEVELOPMENT OF INTELLIGENCE IN CHILDREN.—By Alfred Binet, Sc.D. and T. H. Simon, M. D. Translated by Elizabeth Kite and edited by Henry H. Goddard. Publication of the Training School at Vineland, New Jersey.

This work constitutes a complete exposition and the practical working methods for the application of the much-talked-of Binet-Simon scale for the measurement of the intelligence, which is being used by all who would handle scientifically those of subnormal mentality.

In order to recognize and classify inferior states of intelligence the following methods are used:

"1. The medical method, which aims to appreciate the anatomical, physiological and pathological signs of inferior intelligence.

"2. The pedagogical method, which aims to judge of the intelligence according to the sum of acquired knowledge.

"3. The physiological method, which makes direct observations and measurements of the degree of intelligence.

"The medical method is indirect because it conjectures the mental from the physical. The pedagogical method is more direct; but psychological is the most direct of all because it aims to measure the state of the intelligence as it is at the present moment. It does by experiments which oblige the subject to make an effort which shows his cap-

ability in the way of comprehension, judgment, reasoning, and invention."

The fundamental idea of the psychological method embraces what is termed a "measuring scale," which consists of a series of tests of increasing difficulty, and which has passed the theoretical stage and is now recognized as both a scientific and practical method of measuring the grade of intelligence in terms of "normal years."

The work, therefore, forces itself upon all who keep abreast of psychological progress.

A MANUAL OF NERVOUS DISEASES.—By Irving J. Sparc, M. D., Professor of Neurology at the University of Maryland, Baltimore. 12 mo. of 660 pages with 169 illustrations. Philadelphia and London: W. B. Saunders Company, 1916, cloth \$2.75 net.

This volume has been prepared for the student and general practitioner, and, as such, is one of the few works extant which might be designated as the "happy medium" between a compend and a treatise on Nervous Diseases.

It is not probable that authors or critics will ever agree as to what and what not, or how much or how little, should appear in a text book, but experience and observation have forced the reviewer to the conclusion that it is preferable to have too little than too much, so long as it is more than a "compend," since the teacher may supply an apparent (in its double meaning) deficiency; whereas, if the text is too lengthy for the convenience of the student, he will rarely cover the prescribed course of reading, and, occasionally, he will read not at all. We agree with the author, and so teach, that "the generally expressed opinion that the study of diseases of the nervous system is particularly difficult, is due to a lack of a proper knowledge of the anatomy and physiology of the nervous system," hence we note with satisfaction the generous space and numerous illustrations devoted to elucidating the fundamental principles of neurology.

We are convinced that the work will supply the needs of the student and prove a valuable addition to the library of the general practitioner.

HOW TO LIVE. RULES FOR HEALTHFUL LIVING BASED ON MODERN SCIENCE.—Authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extension Institute, Inc. By Irving Fisher, Chairman, Professor of Political Economy, Yale University, and Eugene Lyman Fisk, M.D., Director of Hygiene of the Institute. Eighth revised edition. Cloth, \$1.00. Funk & Wagnalls Co., New York and London, 1916.

To do justice to this work and maintain a reputation for veracity and sobriety would necessitate reproducing the full text, which is "rather" impracticable. However, we will venture to say it is a practical and authentic work for laymen, to whom the physician may recommend it with propriety and the assurance that they will get "safe and sane" information to replace the dangerous "hobbies" which the average layman acquires, often from incapable fanatics.

A chapter on eugenics, in which are timely annotations to correct the now frequent erroneous popular ideas regarding the meaning of that term, which many believe refers only to sex hygiene, concludes this readable and valuable work.

MECHANISMS OF CHARACTER FORMATION.—An Introduction to Psychoanalysis.—By William A. White, M. D. The MacMillan Co., publishers, New York City.

A subtle exposé of an abstruse subject "the new (i. e., Freudian) psychology," or psychoanalysis—a psychology, in the words of the author, "which has its origin in trying to help sick people, in trying to alleviate their sufferings and, from the very first, dealt with men and women in the raw, as they really were."

It treats of the evolution of the ego through "conflict" which is "at the basis of life;" clarifies "libido," as used by Freud by dividing it into two different forms, viz.—"nutritional libido, the function of which is self-preservation, and of a sexual libido, the function of which is race perpetuation," from which, "all pleasure is at root sexual, even the pleasure derived from satisfying hunger," and interprets dreams and the rationalé of sublimation through "conflict" which may be symbolized in the dreams.

PSYCHIATRY AND GYNECOLOGY.—By Francis M. Barnes, Jr., M. D., St. Louis, From Surgery, Gynecology and Obstetrics, May, 1916, pages 579-591.

This is an elaborate discussion of the "relations which disease or dysfunction of the female generative organs may bear to mental disorders," accompanied with an extensive bibliography bearing thereon. The author concludes with the statement that: "The calm judgment of the majority, both psychiatrists and gynecologists, tends at present strongly to the belief that in female genital disease or dysfunction we do not find a cause of insanity and that gynecological treatment, even where indicated, cannot be recommended as a cure for the psychoses."

THE INSTITUTION QUARTERLY, an official organ of the Public Charity Service of Illinois, September 30th, 1916, published by the State Board of Administration, The State Charities Commission and The State Psychopathic Institute.

This issue contains a number of interesting and valuable contributions, among them are Public Outdoor Relief in Chicago; Corporal Punishment in the United States; The Morals Court in Chicago; The Aftermath of Public Outdoor Relief in Brooklyn; Principles and Practical Methods in the Diagnosis of Mental Diseases as Employed in the State Hospitals of Illinois, and Pneumographic Studies of Emotional Reactions in Dementia Praecox.

THE INTELLIGENCE OF THE FEEBLE-MINDED.—By Alfred Binet, ScD. and Th. Simon, M. D., translated by Elizabeth S. Kite, and edited by Henry H. Goddard. Publication of the Training School at Vineland, New Jersey.

This may well be termed a companion volume to Binet's and Simon's "The Development of Intelligence in Children," herein elsewhere reviewed, in that it elaborates, analyzes and elucidates the rationalé of the formulated principles of the latter work and gives Binet's and Simon's own application of their scale to the problem of the feeble-minded, besides discussing at length feeble-mindedness, as well as dementia, together with methods for their differentiation.

THE SIGNIFICANCE OF PSYCHOANALYSIS FOR THE MENTAL SCIENCE.—By Drs. Otto Rank and Hans Sachs, price \$1.50. Translated by Dr. Charles R. Payne Journal of Nervous and Mental Disease Publishing Co., 64 West 56th Street, New York.

This work, which is a profound psychological discussion of the subject, has been, referred to a collaborator for review which will appear in our next issue.

DIFFERENTIATION BETWEEN UPPER (CENTRAL) AND LOWER (PERIPHERAL) MOTOR NEURON INVOLVEMENT.—By George B. Fletcher, M. D., Little Rock, Arkansas. From the Journal of the Arkansas Medical Society, Aug., 1916.

A brief description of the Anatomy and Physiology of the tracts and neurons involved in "upper" and "lower" neuron lesions with an epitome of their syndromes for the purpose of differential diagnosis. A convenient remembrance for the student and practitioner.

MORTALITY STATISTICS for 1914—Fifteenth Annual Report. Compiled under the supervision of Sam L. Rogers, Director of the United States Census Bureau, Washington, D. C.

A valuable addition to the medical library, as it gives much of value and interest to the physician. This report shows a death rate of 13.6 per 1000 population, the lowest ever recorded for the registration area.

THE LABORATORIES OF McLEAN HOSPITAL for research in Pathological Psychology and Biochemistry. By Edward Cowles, M. D. From The Institutional Care of the Insane in the United States and Canada, Vol. II.

THE DIFFERENTIAL DIAGNOSIS OF SOME OF THE MORE COMMON TYPES OF PSYCHOSES.—Francis M. Barnes, Jr., M. D., St. Louis. From The Journal of the Missouri State Medical Association, November, 1916.

THE BIOLOGICAL POINT OF VIEW IN PSYCHOLOGY AND PSYCHIATRY.—By E. Stanley Abbot, Waverly, Mass. From The Psychological Review, Vol. XXIII, No. 2, March, 1916.

DEFORMITIES OF THE FOOT—STATIC FOOT TROUBLE.—
By Edward L. Cooley, B. S., M. D., St. Louis.

A brief but comprehensive monograph upon very common conditions which are the source of many of the aches and pains of body and legs, and too frequently overlooked by the average physician.

PREVENTABLE FORMS OF MENTAL DISEASE AND HOW TO PREVENT THEM.—By E. Stanley Abbot, M. D., Belmont, Mass. Publication No. 12, Massachusetts Society for Mental Hygiene.

THE INTERPRETATION OF ROENTGENOGRAMS OF THE CHEST IN TUBERCULOSIS.—J. J. Singer, M. D., St. Louis. From The Journal of the Missouri State Medical Association, August, 1916.

INDUCED LEUCOCYTOSIS AS AN AID TO SURGERY.—Wilfred G. Fralick, M. D., New York. From the "Medical Times," Vol. 44, p. 249.

REVIEW OF Terman's "MEASUREMENT OF INTELLIGENCE."—F. L. Wells. From School and Society, Vol. IV., No. 86, pages 296-299, August 19, 1916.

REPORT OF INSPECTOR-GENERAL OF THE INSANE for the year 1915.—By Eric Sinclair, Inspector-General of the Insane, Sydney, New South Wales.

THE TREATMENT OF PARALYSIS AGITANS WITH PARATHYROID GLAND.—By Wm. N. Berkeley, A. B., Ph. H., M. D., New York. From the Medical Record, July 15, 1916.

THE INTELLIGENCE EXAMINATION AND EVALUATION.—By J. Victor Haberman, M. D. From The Psychological Review, Sept., 1916.

THIRTY-FOURTH ANNUAL REPORT OF THE STATE HOSPITAL FOR THE INSANE at Warren, Penn., for the year ending May thirty-first, nineteen hundred sixteen.

PENNSYLVANIA HOSPITAL.—Annual Report of the Department at West Philadelphia for the year ending second month, twenty-ninth, nineteen hundred and sixteen.

INTRASPINCTERIC VESICAL TUMORS.—By Clarence Martin, M. D., St. Louis, Mo. From The St. Paul Medical Journal, Vol. XVIII, No. 6, 1916.

THE FACTOR OF FEAR IN NERVOUS CASES.—Hugh T. Patrick, M. D. From the Journal of American Medical Association, July 15, 1916.

BRAIN-TUMOR OR HYSTERIA.—By J. Victor Haberman A. B., M. D., From The Medical Record, Oct. 7, 1916

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